



City of Salford.

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# ANNUAL REPORT

OF THE

Medical Officer of Health

FOR THE YEAR

1938.

BY

H. OSBORNE,

MEDICAL OFFICER OF HEALTH.







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MRS. RICHARDS..... Representing the Manchester and Salford Women Citizens' Association.

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Maternity and Child Welfare Sub-Committee—Mrs. WADE, representing the Ladies' Public Health Society ; Mrs. HARGREAVES, representing the Manchester and Salford Women Citizens' Association ; and Mrs. SOUTHERN, representing the Women's Guild of the Pendleton Co-operative Industrial Society Limited.

## STAFF.

## Public Health Department.

---

Medical Officer of Health.....	}	H. OSBORNE, M.D., M.R.C.S., D.P.H., etc.
Administrative Tuberculosis Officer ....		
Clinical Tuberculosis Officers.....	{	E. N. RAMSBOTTOM, M.A., B.Sc., M.D. (Lond.), D.P.H., etc.
		H. S. DAVIES, M.R.C.S., L.R.C.P., D.P.H.
Maternity and Child Welfare Medical Officers.....	{	M. SPROUL, M.B., Ch.B., D.P.H.
		K. M. BOYES, M.B., Ch.B., D.P.H.
		M. MAXWELL-REEKIE, M.B., Ch.B. (part- time).
Consulting Obstetrician.....		W. R. ADDIS, M.C., M.B., Ch.B.
City Pathologist.....		G. J. CRAWFORD, B.Sc., M.D., M.R.C.P. (Lond.), D.P.H.
Assistant Pathologist.....		L. STENT, M.D., M.R.C.S., L.R.C.P.
Venereal Diseases Medical Officer.....		R. MARINKOVITCH, M.D.
Asst. Venereal Diseases Medical Officers.		F. M. BLADES, M.B., Ch.B.
		R. C. WEBSTER, B.Sc., M.D., to 13th June, 1938.
		S. K. APPLETON, from 11th July, 1938.

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## HOPE HOSPITAL.

## WHOLE-TIME STAFF.

Medical Superintendent.....	J. DUDGEON GILES, O.B.E., M.D. (Edin.).
Deputy Medical Superintendent.....	GEORGE BROWN, M.B., Ch.B., F.R.C.S. (Edin.).
Physician.....	WILLIAM MACKAY, M.D., F.R.F.P.S. (Glas.).
Obstetric Officer .....	S. HENDERSON, M.B., Ch.B., M.R.C.S., L.R.C.P., M.C.O.G., M.M.S.A., to 30th June, 1938.
	C. G. ROWORTH, M.R.C.S., L.R.C.P., M.B., B.S. (Lond.), M.C.O.G., from 20th September, 1938.
Assistant Medical Officers.....	SIX.

## VISITING (PART-TIME) STAFF.

General Physician.....	G. J. LANGLEY, M.D., F.R.C.P. (Lond.).
Physician for Diseases of Children.....	CATHERINE CHISHOLM, C.B.E., B.A., M.D. (Manch.).



HOPE HOSPITAL—VISITING (PART-TIME) STAFF—*Continued.*

Obstetrician and Gynæcologist.....	T. F. TODD, L.R.C.P. (Lond.), M.B., B.S. (Lond.), F.R.C.S., Eng., M.C.O.G., M.S. (Lond.).
Orthopædic Surgeon.....	S. M. MILNER, M.A., M.B., Ch.B. (Cantab and Manch.), M.R.C.S., L.R.C.P. (Lond.), F.R.C.S., Eng.
Surgeon for Diseases of the Ear, Nose and Throat.....	W. B. MCKELVIE, M.D., F.R.C.S. (Edin.).
General Surgeon.....	H. T. SIMMONS, B.Sc., M.B., Ch.B., Ch.M. (Manch.), L.R.C.P., M.R.C.S. (Lond.), F.R.C.S., Eng.
Anæsthetist, Radiologist and Lecturer	J. GHOSH, F.R.C.S.I., D.P.H.

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## LADYWELL SANATORIUM.

Medical Superintendent.....	W. EDGE, M.R.C.S., L.R.C.P., D.P.H.
Assistant Resident Medical Officer.....	<div style="display: inline-block; vertical-align: middle;"> <div style="font-size: 3em; vertical-align: middle; margin-right: 5px;">{</div> <div> G. N. M. WISHART, M.R.C.S., L.R.C.P.— to 31st July, 1938. J. STARKIE, M.R.C.S., L.R.C.P.—from 1st August, 1938. </div> </div>
Visiting Aural Surgeon .....	W. B. MCKELVIE, M.D., F.R.C.S. (Edin.).
Junior Resident Medical Officer.....	J. STARKIE, M.R.C.S., L.R.C.P.—to 31st July, 1938. J. PARKER, M.B., Ch.B., D.P.H.—from 15th August, 1938.

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## NAB TOP SANATORIUM.

Medical Superintendent.....	H. M. FLEMING, B.A., M.D., D.P.H.
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Public Analyst.....	G. H. WALKER, Ph.D., B.Sc., F.I.C.
Chief Administrative Assistant.....	E. WOOD.
Chief Sanitary Inspector.....	S. MELLOR.

TO THE HEALTH COMMITTEE OF THE CITY OF SALFORD.

Mr. Chairman and Gentlemen,

I have the honour to present my Report upon the health of the City and the work of the Public Health Department during 1938.

#### **Death Rate.**

The death rate of the City was 13·1 per thousand of the population, a decrease of 1·5 per thousand as compared with the previous year. Whilst the decrease is very satisfactory—in fact much lower than the average for Salford—the rate is not by any means the lowest recorded for the City, namely, 12·4 in 1926.

#### **Birth Rate.**

The birth rate showed an increase from 15·1 in 1937 to 15·8 per thousand of the population in 1938, and this in fact represents an increase of nearly one hundred births in the City as compared with the previous year. My reason for referring particularly to this fact is that, for several years, there has been a marked decrease in the number of births occurring in the City.

#### **Infantile Mortality Rate.**

It is with the greatest satisfaction that I have to report that the year 1938 produced a new low record for Salford in the deaths of children under one year of age. The number of deaths of such children during that year was 74 in each thousand children born. This reduction in the deaths of infants provides new evidence of the progress that can be made under the stimulus and guidance of an energetic Maternity and Child Welfare scheme. I am aware that Salford does not lead the field so far as figures are concerned—other towns more fortunately situated and far less congested have advantages which give them a long start in the race. But Salford is gaining ground and, granted a reasonable development of its existing scheme will, I feel sure, more than make up for the disadvantages under which its population is labouring.

Evidence that the importance of this service is appreciated by the public is forthcoming through recent applications received from private organisations for the extension of clinic facilities in the Seedley, Irlams-o'th'-Height and Lower Kersal Districts. I am in sincere sympathy with these applications and strongly recommend the Committee to favourably consider such proposals if the ways and means can be provided.

#### **Cubicle Block—Ladywell Sanatorium and Isolation Hospital.**

Much progress towards the completion of this building had been made by the end of 1938. The furnishing and equipment will be completed as speedily as possible in preparation for the formal opening during the coming year.



Ladywell Sanatorium was at times taxed to its utmost capacity during 1938 in order to cope with a large influx of patients from the out-districts with which the Corporation are under agreement for the treatment of cases of infectious disease occurring in those areas. It is satisfactory to note that the resources of the Institution and its staff found themselves fully capable of dealing with the unusual demands made upon them.

### **Tuberculosis.**

The control gained over tuberculosis was maintained during 1938, the death rate from pulmonary tuberculosis remaining at 0·9 per thousand of the population—a similar rate to that for 1937 and equal to the lowest recorded in Salford.

It is gratifying to note the continuance of the beneficial results of the Tuberculosis Scheme, which encourages one to look forward to a not very distant future in which the threat of Tuberculosis to the individual may be reduced to a negligible quantity.

The Health Committee are to be congratulated upon their most recent contribution to the good work by approving the purchase of an X-ray apparatus of the most modern type for installation in the Tuberculosis Dispensary. This apparatus will be of untold value in diagnosis and will assist, therefore, in the early ascertainment of cases referred to the Dispensary for examination. It cannot be too strongly emphasised that the chances of recovery are increased greatly if tuberculosis can be discovered in its early—and, therefore, most curable—stages.

### **Hope Hospital.**

Much valuable work was again accomplished in Hope Hospital during 1938, in spite of the fact that, for a considerable portion of the year, it was necessary for financial reasons to close down two wards. One of the most important features of the work carried on by the hospital is the continued increase in the number of confinements in the maternity wards. Each year sees an increase in the requests for admission and it is becoming obvious that a considerable proportion of married women prefer the idea of institutional confinement to confinement at home, and that this proportion is constantly increasing. It is evident that serious thought will need to be given to the question of extending the maternity accommodation provided at Hope Hospital in the comparatively near future.

It is evident too that there is need of an improvement in the accommodation for mental patients. This subject has been referred to repeatedly by the visiting Commissioners and it is very desirable, if at all possible, that something should be done to ameliorate the conditions under which this type of patient is accommodated.

### **Air Raid Precautions.**

The training of First Aid personnel and the organisation of a scheme for the provision of First Aid Posts, First Aid Party Depôts and their equipment threw a considerable strain upon the staff of the Department during 1938, particularly during and after the September crisis. It would seem that this heavy addition to the normal work of the Department is to be of a permanent nature, a large proportion of which under existing arrangements is being and will be undertaken by members of the staff voluntarily in their own time. I think it desirable to make a special acknowledgment of the services rendered in this connection.

### **Atmospheric Pollution.**

Observations of the pollution of the atmosphere continued to be carried on throughout the year and an account of the work done will be found in the portion of the City Analyst's Report appearing on pages 159 to 206 of this volume.

In concluding this introduction to my Report, I wish to offer my warmest thanks to the Committee for their constant assistance and encouragement; I am grateful, too, for the loyal and active co-operation of the staff of the Department.

I have the honour to be, Mr. Chairman and Gentlemen,

Your obedient Servant,

H. OSBORNE,

Medical Officer of Health.



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## SECTION I.

# Mortality Statistics.

### STATISTICAL SUMMARY, 1938.

**Area.**—The City of Salford has a total area of 5,202 acres.

**Population.**—(Registrar-General's Estimate at Mid-year, 1938)..... 199,409  
 „ (Census, 1931)..... 223,438

**Density.**—The Mean Density of the City is equal to 38·3 persons per acre.

Live Births	{	Legitimate 1,517 Males, 1,520 Females .....	3,037
	{	Illegitimate 65 „ 43 „ .....	108
		Total	3,145

Annual Rate of Births per 1,000 of the Population..... 15·8

Still Births	{	Males 78	}	Total.....	148
	{	Females 70	}		

Annual Rate of Still Births per 1,000 Total Births..... 44·9

Deaths	{	Males 1,371	}	2,607
	{	Females 1,236	}	

Annual Rate of Mortality per 1,000 of the Population..... 13·1

Percentage of total deaths occurring in Public Institutions.....56·1 per cent.

**Deaths from Puerperal Causes :—**

	Deaths.	Rate per 1,000 Total Births.
Puerperal Sepsis.....	4	1·2
Other Puerperal Causes.....	10	3·0
	Total 14	4·2

**Death-rate of Infants under one year of age per 1,000 live births :—**

	Legitimate, 70.	Illegitimate, 185.	Total.....	74
Deaths from Measles (all ages).....				26
„ „ Whooping Cough (all ages).....				17
„ „ Diarrhoea (under 2 years of age).....				29



TABLE M. 1.

DEATHS IN WARDS FOR THE YEAR 1938.

CAUSES OF DEATH.	AT ALL AGES.																
	City.	Albert Park.	Charlestown.	Claremont.	Crescent.	Docks.	Kersal.	Langworthy.	Mandley Park.	Ordall Park.	Regent.	St. Matthias.	St. Paul's.	St. Thomas.	Seedley.	Trinity.	Waste.
Enteric Fever.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Small-pox.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles.....	26	1	...	2	3	1	1	1	1	1	...	1	...	5	...	8	1
Scarlet Fever.....	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Whooping Cough.....	17	...	...	...	...	4	...	...	4	1	2	1	2	2	...	1	1
Diphtheria and Croup.....	11	...	1	...	1	1	1	2	...	...	1	...	1	...	1	1	1
Influenza.....	13	...	3	1	2	...	...	2	...	1	...	...	2	1	...	...	2
Erysipelas.....	2	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...
Encephalitis Lethargica.....	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
Tuberculosis of Respiratory System.....	187	10	12	10	13	18	12	11	15	22	13	11	10	10	5	11	4
Tuberculous Meningitis.....	9	1	...	...	1	...	...	1	3	...	1	1	...	...	...	1	...
Other Tuberculous Diseases.....	19	2	1	...	2	2	...	3	1	1	...	1	1	1	1	2	1
Syphilis.....	7	...	...	...	2	1	...	...	...	1	1	...	...	...	...	1	1
General Paralysis of the Insane, etc.....	6	...	...	...	1	...	...	...	1	...	...	...	...	1	...	2	1
Cancer (Malignant Disease).....	333	27	15	18	21	20	18	13	19	27	24	21	18	23	29	26	14
Diabetes.....	29	2	1	1	...	4	5	1	3	3	...	2	1	4	1	1	...
Rheumatic Fever.....	16	1	1	1	1	2	2	2	...	1	1	2	1	1	...	...	...
Meningitis.....	6	...	1	...	1	1	...	1	...	...	...	1	...	...	1	...	...
Cerebro-Spinal Fever.....	5	...	1	...	...	...	...	...	...	1	...	1	...	...	1	1	...
Cerebral Hæmorrhage, etc.....	124	18	6	14	7	6	7	9	5	9	10	7	4	6	4	6	6
Heart Disease.....	565	47	32	42	38	30	28	36	37	39	34	44	26	26	30	39	37
Aneurysm.....	13	2	...	...	2	1	1	3	...	1	...	1	1	1	...	...	...

TABLE M. 1—Continued.

DEATHS IN WARDS FOR THE YEAR, 1938.

CAUSES OF DEATH.	AT ALL AGES.																
	City.	Albert Park.	Charlestown.	Claremont.	Crescent.	Docks.	Kersal.	Langworthy.	Mandley Park.	Ordsall Park.	Regent.	St. Matthias.	St. Paul's.	St. Thomas.	Seedley.	Trinity.	Waste.
Other Circulatory Diseases.....	232	16	16	18	16	10	14	10	22	12	18	14	12	20	9	16	9
Bronchitis.....	125	9	5	4	8	8	1	9	10	14	9	19	8	8	2	3	8
Pneumonia (all forms).....	194	17	12	10	23	11	3	11	11	10	16	16	17	12	6	15	4
Other Respiratory Diseases.....	11	...	2	2	...	...	...	...	1	1	...	...	...	1	1	2	1
Diarrhoea and Enteritis.....	29	2	4	...	1	2	2	2	3	1	3	4	3	...	2	1	...
Peptic Ulcer.....	30	5	2	...	2	...	...	2	3	...	3	2	3	...	2	...	...
Appendicitis.....	12	1	1	1	1	...	...	1	...	...	...	...	...	...	...	2	3
Cirrhosis of Liver.....	8	1	...	...	1	1	...	1	...	...	...	...	...	...	...	1	2
Other Diseases of Liver, etc.....	8	1	2	...	...	1	1	...	...	...	1	1	...	...	...	1	2
Other Digestive Diseases.....	38	1	2	2	3	2	3	6	3	2	1	2	1	...	4	...	1
Nephritis, Acute and Chronic.....	65	7	2	2	7	4	5	4	3	4	5	2	4	5	2	3	6
Puerperal Sepsis.....	4	...	...	1	...	...	...	...	...	1	1	...	...	...	...	...	1
Other puerperal causes.....	10	2	...	...	2	...	2	...	...	1	...	...	...	1	1	1	...
Congenital Debility and Malformation.....	39	2	4	3	3	2	...	1	5	2	3	1	3	3	1	3	3
Premature Birth.....	52	3	7	5	2	2	...	4	4	3	5	4	5	2	2	2	2
Senility.....	67	3	5	6	3	4	3	8	3	4	2	5	...	2	5	7	7
Suicide.....	20	3	1	...	...	2	1	1	2	2	...	1	...	2	1	2	2
Other Violence.....	75	7	7	8	6	5	5	7	3	5	3	3	4	2	3	5	4
Other Defined Diseases.....	190	19	10	16	10	11	11	15	5	11	11	8	13	...	18	10	14
Causes Ill-defined or Unknown.....	7	2	...	...	...	1	1	1	...	...	...	...	...	...	...	1	1
Totals.....	2607	212	156	167	184	157	129	168	169	181	170	176	140	150	133	174	141

TABLE M. 2.

CAUSES OF, AND AGES AT, DEATH DURING THE YEAR, 1938.

CAUSES OF DEATH.	NET DEATHS AT THE SUBJOINED AGES OF " RESIDENTS " WHETHER OCCURRING WITHIN OR WITHOUT THE DISTRICT.								
	All Ages.	Under 1 year.	1 and under 2 years.	2 and under 5 years.	5 and under 15 years.	15 and under 25 years.	25 and under 45 years.	45 and under 65 years.	65 and upwards.
ALL CAUSES—Certified.....	2598	233	37	38	43	115	232	797	1235
Uncertified.....	9	...	...	...	...	...	...	2	7
Enteric Fever.....	...	...	...	...	...	...	...	...	...
Small-pox.....	...	...	...	...	...	...	...	...	...
Measles.....	26	6	12	7	1	...	...	...	...
Scarlet Fever.....	2	...	1	...	1	...	...	...	...
Whooping Cough.....	17	8	6	3	...	...	...	...	...
Diphtheria and Croup.....	11	...	1	5	5	...	...	...	...
Influenza.....	13	1	...	...	1	...	2	4	5
Erysipelas.....	2	...	...	1	...	...	...	...	1
Encephalitis Lethargica.....	1	...	...	...	...	...	...	...	1
Tuberculosis of Respiratory System.....	187	1	...	...	3	48	67	59	9
Tuberculous Meningitis.....	9	3	2	...	4	...	...	...	...
Other Tuberculous Diseases.....	19	2	...	1	2	7	3	2	2
Syphilis.....	7	...	...	...	...	...	...	5	2
General Paralysis of the Insane, Tabes Dorsalis.....	6	...	...	...	...	...	1	5	...
Cancer, Malignant disease.....	333	...	1	...	...	3	16	153	160
Diabetes.....	29	...	...	...	1	...	2	13	13
Rheumatic Fever.....	16	...	...	...	2	4	4	3	3
Meningitis.....	6	3	...	1	...	...	1	1	...
Cerebro-Spinal Fever.....	5	1	...	...	...	1	3	...	...
Cerebral Hæmorrhage, etc.....	124	3	...	...	...	...	5	43	73
Heart Disease.....	565	...	...	...	2	9	26	168	360
Aneurysm.....	13	...	...	...	...	1	5	5	2
Other Circulatory Diseases.....	232	...	...	...	...	...	3	75	154
Bronchitis.....	125	9	...	...	...	3	5	41	67
Pneumonia (all forms).....	194	45	9	13	4	7	15	68	33
Other Respiratory Diseases.....	11	...	...	...	...	2	...	7	2
Diarrhœa and Enteritis.....	29	28	1	...	...	...	...	...	...
Peptic Ulcer.....	30	...	...	...	...	...	7	19	4
Appendicitis.....	12	...	...	...	3	2	4	3	...
Cirrhosis of Liver.....	8	...	...	...	...	...	...	4	4
Other diseases of Liver, etc.....	8	1	...	...	...	...	1	3	3
Other Digestive Diseases.....	38	3	...	2	3	3	3	8	16
Nephritis Acute and Chronic.....	65	1	...	...	...	1	12	29	22
Puerperal Sepsis.....	4	...	...	...	...	...	4	...	...
Other Puerperal causes.....	10	...	...	...	...	1	9	...	...
Congenital Debility and Malforma- tion.....	39	37	...	1	...	1	...	...	...
Premature Birth.....	52	52	...	...	...	...	...	...	...
Senility.....	67	...	...	...	...	...	...	2	65
Suicide.....	20	...	...	...	...	1	2	14	3
Other Violence.....	75	8	...	3	7	8	13	15	21
Other Defined Diseases.....	190	21	4	1	4	13	19	47	81
Diseases ill-defined or unknown....	7	...	...	...	...	...	...	3	4
Totals.....	2607	233	37	38	43	115	232	799	1110



TABLE M. 3.

BIRTHS IN THE CITY OF SALFORD AND IN ITS WARDS, DISTINGUISHING  
DEATHS OF LEGITIMATE AND ILLEGITIMATE  
INFANTS UNDER ONE YEAR OLD.  
FOR THE YEAR, 1938.

Ward.	Births.		Percentage of Illegit. Births to Total Births.	Deaths under One Year.		Proportion of Deaths under One Year per 1,000 Births.		
	Total.	Illegit.		Total.	Illegit.	Total.	Legit.	Illegit.
Albert Park.....	226	16	7·1	19	2	84	81	125
Charlestown.....	216	8	3·7	25	1	116	115	125
Claremont .....	181	....	....	12	....	66	66	....
Crescent.....	225	5	2·2	17	1	76	73	200
Docks.....	186	8	4·3	13	1	70	67	125
Kersal.....	131	5	4·6	3	....	23	24	....
Langworthy.....	218	8	3·7	15	....	69	71	....
Mandley Park. ....	246	15	6·1	18	7	73	48	467
Ordsall Park.....	221	5	2·3	14	1	63	60	200
Regent.....	192	7	3·7	22	1	115	114	143
St. Matthias'.....	226	8	3·5	18	3	80	69	375
St. Paul's.....	191	3	1·6	16	....	84	85	....
St. Thomas'.....	202	5	2·5	9	....	45	46	....
Seedley.....	127	3	2·4	7	....	55	56	....
Trinity.....	195	7	3·6	14	2	72	64	286
Weaste.....	162	5	3·1	11	1	68	64	200
<b>Totals.....</b>	<b>3,145</b>	<b>108</b>	<b>3·4</b>	<b>233</b>	<b>20</b>	<b>74</b>	<b>70</b>	<b>185</b>

CORRESPONDING DATA FOR THE CITY FOR THE TEN YEARS 1928-1937.

City.....	34,395	1,318	3·8	3,264	195	95	93	148
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TABLE M. 4.

SHOWING THE BIRTHS IN THE CITY OF SALFORD, DEATHS OF LEGITIMATE AND ILLEGITIMATE INFANTS UNDER ONE YEAR OLD AND THE PROPORTION OF DEATHS UNDER ONE YEAR OF AGE PER 1,000 BIRTHS DURING THE YEARS 1915 TO 1938.

Year.	Births.			Percentage of Illegitimate Births to Total Births.	Deaths under One Year.			Proportion of Deaths under One Year per 1,000 Births.		
	Total.	Legit.	Illegit.		Total.	Legit.	Illegit.	Total.	Legit.	Illegit.
1915.....	5455	5257	198	3·6	733	692	41	134	132	207
1916.....	5091	4894	197	3·9	587	544	43	115	112	218
1917.....	4452	4234	218	4·9	551	498	53	124	118	243
1918.....	4282	4043	239	5·5	478	436	42	111	107	175
1919.....	4435	4179	256	5·8	501	466	35	113	111	137
1920.....	6441	6170	271	4·2	630	584	46	97	94	169
1921.....	5993	5702	291	4·8	641	585	56	107	102	192
1922.....	5416	5169	247	4·5	599	564	35	110	109	141
1923.....	5047	4841	206	4·1	493	458	35	98	95	170
1924.....	4745	4569	176	3·7	579	533	46	122	117	261
1925.....	4597	4398	199	4·3	482	452	30	105	103	151
1926.....	4511	4349	162	3·6	464	434	30	103	100	185
1927.....	4301	4130	171	4·0	348	328	20	81	79	117
1928.....	4073	3915	158	3·9	431	408	23	106	104	146
1929.....	3903	3761	142	3·6	489	460	29	125	122	204
1930.....	3787	3640	147	3·9	323	290	33	86	80	224
1931.....	3479	3357	122	3·5	351	326	25	101	97	205
1932.....	3401	3261	140	4·1	336	321	15	99	98	107
1933.....	3316	3195	121	3·6	264	250	14	80	78	116
1934.....	3141	3010	131	4·2	292	277	15	93	92	115
1935.....	3156	3059	97	3·1	245	230	15	78	75	155
1936.....	3089	2960	129	4·2	277	263	14	90	89	109
1937.....	3050	2919	131	4·3	256	244	12	84	84	92
1938.....	3145	3037	108	3·4	233	213	20	74	70	185

TABLE M. 5.

SHOWING THE BIRTH-RATES, ALSO RATES OF MORTALITY FROM ALL CAUSES, FROM THE SEVEN PRINCIPAL ZYMOTIC DISEASES, AND FROM PHTHISIS, CANCER, NERVOUS DISEASES, HEART DISEASES, BRONCHITIS, PNEUMONIA AND THE INFANT MORTALITY RATE, DURING THE YEARS 1878 TO 1938.

Years.	Population.	Rates per 1,000 Population from									Deaths under One Year to 1,000 Births.	Marriage Rate.
		Births.	Deaths, All Causes.	Seven Principal Zymotic Diseases.	Phthisis.	Cancer.	Nervous Diseases.	Heart Diseases.	Bronchitis.	Pneumonia.		
1878 ....	160,277	44·7	27·1	5·4	2·7	0·5	3·5	1·1	3·6	1·8	185	17·9
1879* ..	165,899	43·0	26·7	4·2	2·9	0·4	3·7	1·2	4·3	1·8	170	15·2
1880 ....	171,727	41·4	27·9	7·4	2·7	0·4	3·2	0·9	3·4	1·9	197	16·6
1881 ....	177,760	38·8	22·5	3·0	2·5	0·5	3·1	1·1	3·6	1·6	163	16·4
1882 ....	179,855	39·7	23·7	4·0	2·4	0·4	3·6	1·1	2·8	1·7	177	16·9
Average 5 years.		41·5	25·6	4·8	2·6	0·4	3·4	1·1	3·5	1·8	178	16·6
1883 ....	181,951	37·3	23·6	3·4	2·7	0·4	3·1	1·2	3·0	1·7	171	16·1
1884* ..	184,047	38·8	24·4	4·4	2·6	0·5	2·9	1·1	2·8	1·7	184	16·1
1885 ....	186,142	37·6	23·0	3·6	2·6	0·5	2·9	1·2	3·0	1·9	174	16·1
1886 ....	188,238	38·5	24·8	4·1	2·6	0·5	2·8	1·3	3·3	1·8	197	15·3
1887 ....	190,334	36·6	25·5	4·9	2·3	0·5	3·2	1·3	2·9	2·2	195	15·4
Average 5 years.		37·8	24·3	4·1	2·6	0·5	3·0	1·2	3·0	1·9	184	15·8
1888 ....	192,429	37·1	24·8	3·9	2·3	0·5	3·0	1·1	3·0	2·1	184	15·2
1889 ....	194,525	35·9	25·1	5·3	1·9	0·6	2·5	1·3	2·6	1·9	181	16·7
1890* ..	196,621	36·1	27·7	4·4	2·2	0·5	2·0	1·3	3·4	3·8	198	17·5
1891 ....	198,775	36·3	26·0	3·4	2·2	0·5	2·2	1·1	3·7	3·0	194	18·1
1892 ....	200,833	35·8	24·6	4·6	1·9	0·6	2·0	1·2	2·6	2·9	186	16·7
Average 5 years.		36·2	25·6	4·3	2·1	0·5	2·3	1·2	3·1	2·7	189	16·8
1893 ....	203,015	34·7	24·1	4·2	1·9	0·6	2·0	1·4	2·6	2·3	211	16·2
1894 ....	205,220	34·3	21·1	3·3	1·8	0·6	2·0	1·1	1·9	2·3	174	17·1
1895 ....	207,449	35·9	25·6	5·0	1·9	0·6	2·3	1·3	2·6	2·7	229	17·4
1896* ..	209,703	35·6	23·1	4·2	1·5	0·6	2·0	1·4	2·2	2·7	200	18·1
1897 ....	211,981	35·2	23·9	5·6	1·8	0·6	2·1	1·3	2·4	2·1	219	18·6
Average 5 years.		35·1	23·6	4·5	1·8	0·6	2·1	1·3	2·3	2·4	207	17·5
1898 ....	214,284	34·9	22·8	4·2	1·8	0·8	2·2	1·2	2·2	2·2	213	18·6
1899 ....	216,612	34·1	23·9	4·4	1·8	0·6	2·3	1·4	2·5	2·7	211	18·7
1900 ....	218,965	33·3	25·3	4·1	1·8	0·6	2·4	1·7	3·2	2·8	208	17·3
1901 ....	221,212	29·2	21·7	4·2	1·8	0·7	1·9	1·5	2·3	1·9	205	17·9
1902* ..	222,233	34·0	19·3	2·7	1·7	0·7	2·0	1·5	2·2	2·1	157	18·4
Average 5 years.		33·1	22·6	3·9	1·8	0·7	2·2	1·5	2·5	2·3	199	18·2
1903 ....	223,260	32·6	19·4	2·9	1·8	0·7	1·9	1·4	2·1	1·9	168	18·1
1904 ....	224,299	32·4	21·4	4·4	2·0	0·6	1·8	1·7	2·2	1·9	193	21·5
1905 ....	225,327	31·8	17·7	2·6	1·5	0·6	1·7	1·6	1·8	1·8	148	17·8
1906 ....	226,367	31·2	19·1	3·3	1·7	0·8	1·7	1·5	2·0	1·8	162	18·6
1907 ....	227,413	30·6	18·5	2·2	1·7	0·7	1·7	1·6	2·1	2·3	140	17·9
Average 5 years.		31·7	19·2	3·1	1·7	0·7	1·8	1·6	2·0	1·9	162	18·8



TABLE M. 5—Continued.

Years.	Population.	Rates per 1,000 Population from									Deaths under One Year to 1,000 Births.	Marriage Rate.
		Births.	Deaths, All Causes.	Seven Principal Zymotic Diseases.	Phthisis.	Cancer.	Nervous Diseases.	Heart Diseases.	Bronchitis.	Pneumonia.		
1908* ..	228,463	31·2	18·7	3·2	1·6	0·7	1·6	1·4	1·9	1·7	153	15·5
1909 ....	229,519	29·5	19·0	2·5	1·5	0·8	1·7	1·4	2·3	2·3	141	15·6
1910 ....	230,579	28·6	16·2	1·8	1·4	0·9	1·6	1·4	1·8	1·7	131	16·0
1911 ....	231,641	27·4	17·4	2·5	1·6	0·9	1·3	1·3	1·8	1·8	154	....
1912 ....	232,726	26·8	17·2	2·2	1·5	1·0	1·4	1·5	2·1	2·0	130	....
Average 5 years.		28·7	17·7	2·4	1·5	0·9	1·5	1·4	2·0	1·9	142	....
1913* ..	233,849	27·0	16·3	1·9	1·4	1·0	1·4	1·8	1·8	1·7	139	....
1914 ....	234,975	26·9	17·1	1·9	1·6	1·1	1·4	1·8	1·8	1·8	126	....
1915 ....	219,979†	24·8	19·1	2·8	1·7	1·1	1·4	1·6	2·3	1·9	134	....
1916 ....	214,229†	21·8	15·8	1·2	1·6	1·0	1·3	1·3	1·9	1·5	115	....
1917 ....	211,373†	18·9	16·0	1·6	1·5	1·2	1·4	1·3	2·0	1·4	124	....
Average 5 years.		24·3	16·8	1·9	1·6	1·0	1·4	1·6	2·0	1·7	128	....
1918 ....	209,274†	18·3	18·0	1·0	1·6	1·1	1·2	1·1	2·3	1·9	111	....
1919 ....	226,225†	18·8	15·8	0·8	1·2	1·1	1·1	1·1	2·4	1·5	113	....
1920 ....	235,239	27·3	13·7	0·9	1·2	1·0	1·0	1·0	1·8	1·1	98	....
1921* ..	239,100	25·2	13·9	1·1	1·3	1·0	1·0	1·2	1·7	1·5	106	....
1922 ....	240,700	22·1	14·6	1·3	1·3	1·1	0·9	1·1	1·9	1·7	110	....
Average 5 years.		22·3	15·2	1·0	1·3	1·0	1·0	1·1	2·0	1·5	108	....
1923 ....	241,600	20·9	13·5	0·8	1·3	1·2	0·9	1·1	1·6	1·5	98	....
1924 ....	243,700	19·5	14·5	1·3	1·2	1·3	0·7	1·0	1·8	1·6	122	....
1925 ....	244,700	18·8	13·9	1·0	1·3	1·2	0·8	1·0	1·8	1·3	105	....
1926 ....	247,400	18·2	12·4	0·7	1·3	1·3	0·9	1·0	1·6	1·1	103	....
1927* ..	247,600	17·3	13·9	0·7	1·4	1·3	1·1	1·5	1·5	1·3	81	....
Average 5 years.		18·9	13·6	0·9	1·3	1·3	0·9	1·1	1·7	1·4	102	....
1928 ....	241,500	16·9	13·3	0·8	1·2	1·3	0·8	1·3	1·4	1·2	106	....
1929 ....	235,600	16·6	15·4	1·5	1·2	1·3	0·9	1·1	2·2	1·6	125	....
1930 ....	230,100	16·5	13·3	0·9	1·2	1·4	0·8	1·3	1·6	1·1	86	....
1931 ....	225,900	15·4	14·2	0·6	1·2	1·4	0·8	1·4	1·8	1·4	101	....
1932 ....	220,300	15·4	13·2	0·6	1·0	1·7	0·9	1·8	1·1	1·1	99	....
Average 5 years.		16·2	13·9	0·9	1·2	1·4	0·8	1·4	1·6	1·3	103	....
1933 ....	217,000	15·3	13·9	0·3	1·1	1·5	0·9	2·1	1·2	1·2	80	....
1934 ....	213,850	14·7	13·6	0·6	0·9	1·8	0·9	2·5	0·8	1·1	93	....
1935 ....	210,000	15·0	13·0	0·2	0·9	1·6	0·9	2·7	0·8	1·1	78	....
1936 ....	206,000	15·0	14·0	0·6	1·0	1·7	0·8	3·1	0·9	1·1	90	....
1937 ....	201,800	15·1	14·6	0·2	0·9	1·9	0·8	3·5	0·9	1·2	84	....
Average 5 years.		15·0	13·8	0·4	1·0	1·7	0·9	2·8	0·9	1·1	85	....
1938 ....	199,400	15·8	13·1	0·3	0·9	1·7	0·8	2·8	0·6	1·0	74	....

\* In the years 1879, 1884, 1890, 1896, 1902, 1908, 1913, 1921, and 1927 the facts are those registered in 53 instead of 52 weeks; corrections have therefore been made in calculating the rates. † Civil population.

## SECTION II.

# General Work of the Health Department.

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### (A) SANITARY CIRCUMSTANCES AND SANITARY ADMINISTRATION OF THE DISTRICT.

#### Natural and Social Conditions of the District.

Salford is situated in the south-east of Lancashire and is partially divided from Manchester by the River Irwell. The older portion of the City lies along the right bank of the river, and the ground rises gradually from an elevation of 85 feet above sea level to about 250 feet, the mean elevation being 140 feet.

The area of the City of Salford is 5,202 acres. The subsoil consists principally of clay interspersed with sand and gravel, with occasional patches of red sandstone.

The population is largely industrial; a considerable portion of the City is occupied by cotton factories and engineering works, with collieries on the outskirts.

The principal Docks and a portion of the Manchester Ship Canal are situated in Salford.

There is no special influence of any particular occupation on the public health of the area.

Owing to the industrial character of the City, and the close proximity of a number of other industrial towns, the atmosphere of Salford is heavily smoke polluted. This pollution contains an excessive proportion of tarry substances given off from the burning of raw coal in domestic grates. Generally speaking, the rainfall is excessive and the atmosphere humid. Owing to the pollution of the atmosphere and the excess of cloud, there is a deficiency of sunshine.

#### Salford Local Acts and Orders.

Charter of Incorporation for the Borough of Salford granted 16th April, 1844.

Order in Council, dated 14th November, 1854, vesting powers in the Town Council of Salford for providing requisite places of burial for the inhabitants of

the Townships of Salford, Pendleton, and Broughton, and part of the Township of Pendlebury, under the provisions of the Burial Act, 1854.

20 and 21 Vict. cap. cxxxii.

The Salford Borough Act, 1857

25 and 26 Vict. cap. ccv.

The Salford Improvement Act, 1862.

30 Vict. cap. lviii.

The Salford Improvement Act, 1867.

33 and 34 Vict. cap. cxxix.

The Salford Improvement Act, 1870.

34 and 35 Vict. cap. cx.

The Salford Improvement Act, 1871.

38 and 39 Vict. cap. ci.

The Salford Tramways and Improvement Act, 1875.

45 and 46 Vict. cap. xcvi.

Provisional Order relating to the Borough of Salford confirmed by the Local Government Board's Provisional Order Confirmation (No. 8) Act, 1882.

Order dated 20th December, 1882 and made by the Local Government Board under the provisions of "The Divided Parishes and Poor Law Amendment Act," 1876, as amended and extended by the Poor Law Act, 1879, amalgamating a detached part of the Township of Pendlebury with the Township of Pendleton.

48 and 49 Vict. cap. cii.

The Salford Corporation Tramways Order, 1885, confirmed by the Tramways Orders Confirmation (No. 2) Act, 1885.

49 and 50 Vict. cap. xxv.

The Salford Corporation Act, 1886.

53 and 54 Vict. cap. clxxxvii.

The Salford Electric Lighting Order, 1890, confirmed by the Electric Lighting Orders Confirmation (No. 2) Act, 1890.

54 Vict. cap. xiv.

The Salford Corporation Act, 1891.

54 and 55 Vict. cap. ccxi.

Provisional Order relating to the Borough of Salford, confirmed by the Local Government Board's Provisional Orders Confirmation (No. 14) Act, 1891.



54 and 55 Vict. cap. ccxiii.

Provisional Order relating to the Borough of Salford confirmed by the Local Government Board's Provisional Orders Confirmation (Housing of Working Classes) Act, 1891.

55 and 56 Vict. cap. ccxxiii.

Provisional Order relating to the Borough of Salford confirmed by the Local Government Board's Provisional Orders Confirmation (No. 12) Act, 1892.

56 Vict. cap. xxxi.

The Salford Improvement Act, 1893.

60 and 61 Vict. cap. cclv.

The Salford Corporation Act, 1897.

Order of the Local Government Board, dated 11th September, 1897, conferring on the Corporation certain powers with respect to the acquisition by agreement of rights of way, and certain powers, duties, and liabilities with respect to any charity held wholly or partly for the benefit of the said Townships.

61 and 62 Vict. cap. ccxii.

The Salford Order, 1898, confirmed by the L.G.B. Provisional Orders Confirmation (No. 13) Act, 1898.

An Order, dated 2nd March, 1899, and made by the Local Government Board under the provisions of the Housing of the Working Classes Act, 1890, modifying an improvement scheme relating to the Borough of Salford.

62 and 63 Vict. cap. ccxlv.

The Salford Corporation Act, 1899.

63 and 64 Vict. cap. ccxx.

The Salford Corporation Act, 1900.

1 Edw. VII. cap. ccxxii.

The Salford Corporation Act, 1901.

2 Edw. VII. cap. cxlviii.

The Salford Corporation Act, 1902.

3 Edw. VII. cap. ccxxxvi.

The Salford Corporation Act, 1903.

Order in Council dated 27th March, 1905, directing that none but persons duly licensed shall let Lodgings to Seamen in the Borough of Salford.

6 Edw. VII. cap. ci.

The Salford Order, 1906, confirmed by the L.G.B. Provisional Orders Confirmation (No. 2) Act, 1906.

8 Edw. VII. cap. cxlvi.

The Salford Order, 1908, confirmed by L.G.B. Provisional Orders Confirmation (No. 6) Act, 1908.

2 and 3 Geo. V. cap. cxxxvi.

The Salford Order, 1912, confirmed by L.G.B. Provisional Orders Confirmation (No. 10) Act, 1912.

Order of Local Government Board, dated 5th December, 1917 (Venereal Diseases (Anglesey &c.) Order, 1917).

The Salford Corporation Gas (Standard of Calorific Power) Order, 1918.

The Salford (Union of Townships) Order, 1918.

10 and 11 Geo. V. cap. cxlviii.

The Salford Corporation Act, 1920.

Consent Order of Minister of Health, dated 9th February, 1921, to the Creation and Issue of Stock.

Confirming Order of Minister of Health dated 7th April, 1921, under Section 112 of the Public Health Act, 1875, as amended by Section 51 of the Public Health Acts Amendment Act, 1907, declaring that certain trades be Offensive Trades.

Order of Minister of Health, dated 18th July, 1921, confirming Scheme for the equation and consolidation of loans under the Salford Corporation Acts, 1902 and 1920.

Order of the Council, dated 3rd August, 1921, as to Polling Districts and Polling Places.

Order in Council, dated 10th August, 1921, approving Scheme determining the the Boundaries of the Wards of the Borough and apportioning the Councillors.

12 and 13 Geo. V. cap. xli.

The Salford Order, 1922, confirmed by the Ministry of Health Provisional Orders Confirmation (No. 5) Act, 1922.

The Salford Electricity Special Order, 1923.

Order of the Council, dated 3rd September, 1924, altering the boundaries of certain Polling Districts.

Regulations dated 13th May, 1925, made by the Minister of Transport for regulating the use of Electrical Power on the Salford and District, Eccles, Prestwich and Whitefield Tramways, and other matters.

Order of the Council, dated 1st July, 1925, for the re-division of a portion of the constituency of North Salford and the appointment of polling places.

15 and 16 Geo. V. cap. lxxvii.

The Salford Order, 1925, confirmed by Salford Provisional Order Confirmation Act, 1925.

The County Borough of Salford Roads (Restriction) Order, 1926.

Charter, dated 21st April, 1926, appointing Salford a City.

The Salford Gas Order, 1926.

17 and 18 Geo. V. cap. xcix.

The Salford Corporation Act, 1927.

City of Salford (Springfield Terrace Area Improvement Scheme) Order 1928.

The Salford Gas (Charges) Order, 1928.

19 and 20 Geo. V. cap. xxxix.

The Salford Corporation Act, 1929.

20 and 21 Geo. V. cap. cxxxvi.

The Salford Order, 1930, confirmed by Salford Provisional Order Confirmation Act, 1930.

The City and County Borough of Salford (formerly County Borough of Salford) Roads (Restriction) Amendment Order, 1930.

The Cities of Manchester and Salford (Traffic Regulation) Order, 1932.

23 and 24 Geo. V. cap.

The Salford Corporation Act, 1933.

The Salford Stock Order, 1933.

Order of the Secretary of State, dated 20th July, 1934, as to Superannuation of Justices' Clerk and Staff.

The Salford Registration Scheme, 1934, as to Registration of Births, Marriages and Deaths.

The Salford (Measles) Regulations, 1936.

The Salford (Public Works Facilities Compulsory Purchase) Confirmation Order, 1936.

1 and 2 Geo. VI. cap. xcvi.

The Salford Corporation Act, 1938.



**Enactments Adopted by the Council and Applied by Order.**

Infectious Disease (Prevention) Act, 1890 (except secs. 14 and 19). Adopted 7th January, 1891.

Public Health Acts, Amendment Act, 1890, Parts II., III., IV. and V. Adopted 7th January, 1891.

Museums and Gymnasiums Act, 1891. Adopted 7th February, 1894.

Public Libraries Act, 1892. Adopted on poll of Ratepayers, reported to Council, 5th October, 1892.

Private Street Works Act, 1892. Adopted 4th April, 1894.

Notification of Births Act, 1907. Adopted 7th January, 1914.

Public Health Acts Amendment Act, 1907 :

Section 19 (urgent repairs to private streets). Order of Minister of Health, dated 14th April, 1921.

Section 76 (parks and pleasure gardens). Order of Local Government Board, dated 22nd April, 1914.

Section 85 (registries for servants). Order of Secretary of State, dated 12th September, 1923.

Section 94 (licensing of pleasure boats). Order of Ministry of Health, dated 26th January, 1933.

Section 95 (purchase of lands). Order of Local Government Board, dated 27th October, 1908.

Local Government and other Officers' Superannuation Act, 1922. Adopted as from 1st April, 1924.

Public Health Act, 1925 :

Sections 13, 14, 15, 17, 18, 19, 20, 21, 23, 24, 25, 26, 29, 30, 31, 32, 33, 35  
Adopted as from 1st February, 1933.

**Sanitary Circumstances.**

**WATER.**—The water supply is obtained from the Manchester Corporation's reservoirs at Longdendale Valley. It is ample in quantity and excellent in quality.

The whole of the property in the City is supplied on the constant system with water from the Corporation mains. With the exception of a very few houses in common courts, each house is supplied with an internal water supply.

**RIVERS AND STREAMS.**—The question of river pollution is in the hands of the River Irwell Conservancy Committee.

### Drainage and Sewerage.

The drains of the District are satisfactory. Salford sewage is conveyed to the Sewage Works at Weaste by a combined system of Sewers. The sewage is treated with Lime and Copperas, after which it is passed through settling tanks, and thence through aerating filter-beds and humus tanks. The effluent from the humus tanks is discharged into the Manchester Ship Canal and the residual sludge carried out to sea by steamer.

**PUBLIC CLEANSING.**—The removal and disposal of house refuse is under the authority of the Lighting and Cleansing Committee of the Corporation.

### PUBLIC CLEANSING.

No alteration in the method of disposing of dry house refuse in Salford took place during 1938, as compared with 1937. I am indebted to the Director of Public Cleansing for the following particulars as to the method of collection and disposal of refuse, etc., in Salford :—

- |   |   |
|---|---|
| (a) The method of collecting dry house refuse.                        | Weekly collection in semi-dustless loading vehicles from galvanised standard ashbins.   |
| (b) The method of collecting refuse from earth closets and privies.   | No privy ashpits. The number of excreta pails is negligible. The collection of excreta, in two-wheeled tanks, is made during the midnight hours, and taken direct to the Chief Dépôt of the Cleansing Department. |
| (c) The method of disposing of dry house refuse.                      | Strictly under Controlled Tipping methods as laid down by the Ministry of Health, and also by incineration at the Chief Dépôt of the Cleansing Department.  |
| (d) The method of disposing of refuse from earth closets and privies. | (See (b)).  |

### Sanitary Inspection of District.

**STAFF.**—The staff employed in this connection consisted during 1938 of the Chief Inspector, a Deputy Chief Inspector, sixteen Assistant Inspectors.

The systematic inspection of the City was conducted during the year 1938 on the same lines as in previous years. The result of the inspections may be gathered from a perusal of the "Register of Work Done," which is to be found at the end of this section of the report. It shows that the number of complaints received at the office of the Department was 5,565, as compared with 4,576 received in 1937, also that 9,615 dwellinghouses were inspected during the year. The details of each section of the work will be found under the special heading.

TABLE G. 1.

COMMON LODGING HOUSES, 1938.

	Wards.			Total.
	Crescent.	St, Paul's.	Trinity.	
Number on Register.....	4	1	3	8
Number added to Register in 1938.....	....	....	....	....
Number removed from Register in 1938.....	1	....	....	1
Number of Rooms.....	45	6	18	69
„ Beds.....	199	25	367	591
Average Number occupied each night—Males.	82	15	228	325
Females.	....	....	....	....
Notices served on Landlords.....	....	....	....	....
„ „ Keepers.....	....	....	....	....
Number of Day Inspections.....	104	26	79	209
„ Night Inspections.....	....	....	....	....

## Common Lodging Houses.

There were 8 Common Lodging Houses on the register during the year, including "Salford House" in Bloom Street; 4 are in the Crescent Ward, three in Trinity, and one in St. Paul's Wards. These houses contain 69 rooms, with 591 beds. The average number of beds occupied per night was 325 for males and none for females. 209 inspections were made during the day time,



The addresses of and particulars relating to these lodging houses are as follows :—

Address.	Accommodation. Sleeping Rooms.	Lodgers.	Total number of lodgers who could be accom- modated during the year.	Total number of lodgers accom- modated during the year.
17, Bolton Street.....	5	49	17,885	9,317
61, Bury Street.....	7	33	12,045	7,341
"Salford House," Bloom Street..	6	285	104,025	66,520
1 and 1A, Park Place.....	24	125	45,625	20,019
2, Park Place.....	13	25	9,125	5,510
13, Windsor.....	4	15	5,475	374
2, Comus Street.....	6	34	12,410	3,972
2, West High Street.....	6	25	9,125	5,685

The total number of lodgers who could be accommodated during the year, in all the houses, was 215,715, and the total number actually accommodated was 118,738, a difference of 96,977.

Of the 591 beds, an average of 325 was occupied each night, leaving an average of 266 beds empty.

These lodging houses have been kept in good and clean condition during the year, and the Byelaws have been observed.

#### Houses Sublet in Lodgings.

There are 315 houses let in apartments in the City; these contain 1,784 rooms. 18 houses were registered during the year and 123 discontinued.

The registration of these houses gives us power to inspect them at any time. They have been inspected from time to time, and they have received 853 inspections in the day time and 30 at night.

Throughout the year the Lodging-house Inspector has given much attention to the question of overcrowding as regards many of these houses.

There were 41 Notices issued under the Public Health Act and Byelaws; 5 for there being no means provided for the preparation, cooking and storage of food; 1 for a house requiring cleansing and redecorating; 1 for inadequate means of escape in case of fire; and 34 for general sanitary defects.

During the year 34 Notices were complied with.

**Seamen's Lodging Houses.**

There were 6 Seamen's Lodging Houses in the City on the Register during the year, containing 22 rooms and 71 beds. There have been 5 applications for renewals and new licences.

The Byelaws in force regulating these houses have been carried out, and the houses generally kept in good and clean condition. 30 visits have been made during the day time.

The addresses of and particulars relating to these houses are as follows :—

Address.	Accommodation. Sleeping Rooms.	Lodgers.
53, Trafford Road.....	4	18
73, Goodiers Lane.....	4	14
61, Trafford Road.....	3	12
178, West Park Street.....	3	7
78, Monmouth Street.....	3	6
71, Trafford Road.....	5	14

The keepers of these houses are not required to submit a Return of the number of Seamen sleeping on the premises, but it is the general impression from the visits made by the Inspectors that these houses are not used to the fullest extent. This is no doubt due to the slackness of trade in the shipping business.

**Factories.**

The Factories Act, 1937, which came into operation on the 1st July, 1938, consolidates with amendments the Factory and Workshops Acts, 1901 to 1929, and extends the duties of the Local Authorities in respect of supervision.

The old distinction between a factory and a workshop is abolished and the expression "workshop" disappears, only one term, "factory," being used. A distinction is made, however, between factories where mechanical power is used and factories where mechanical power is not used.

The following tables show particulars of the registration and inspection of factories :—

Factories on the Register at the end of the year.	Number.
Factories with mechanical power .....	841
Factories without mechanical power .....	207
Other Premises under the Act (including works of building and engineering construction).....	32

Inspection of Factories.

Premises. (1)	Number of		
	Inspections. (2)	Written Notices. (3)	Occupiers Prosecuted. (4)
Factories with mechanical power .....	165	31	...
Factories without mechanical power	632	39	...
*Other Premises under the Act (in- cluding works of building and engineering construction but not including outworkers' premises).....	7	...	...
Total.....	804	70	...

\*Electrical Stations should be reckoned as factories.

Defects.

Particulars. (1)	Number of Defects.			Number of defects in respect of which Prosecutions were instituted. (5)
	Found. (2)	Remedied. (3)	Referred to H.M. Inspector. (4)	
Want of cleanliness (S. 1).....	28	28	....	....
Overcrowding (S. 2) .....	....	....	....	....
Unreasonable temperature (S. 3).....	....	....	....	....
Inadequate ventilation (S. 4).....	....	....	....	....
Ineffective drainage floors (S. 6).....	....	....	....	....
Sanitary Conveniences (S. 7) {	insufficient .....	23	13	....
	unsuitable or defective.....	25	16	....
	not separate for sexes.....	1	1	....
Other offences..... (Not including offences relating to Home Work or offences under the Sections mentioned in the Schedule to the Ministry of Health (Factories and Workshops Transfer of Powers) Order, 1921, and re-enacted in the Third Schedule to the Factories Act, 1937).	....	....	....	....
Total .....	77	58	....	....



C.—Home Work.

NATURE OF WORK.	OUTWORKERS' LISTS.										Number of Inspections of Outworkers' premises.	OUTWORK IN UN-WHOLESOME PREMISES.			OUTWORK IN INFECTED PREMISES.					
	Lists received from Employers.					Prosecutions.						Instances.	Notices served.	Prosecutions.	Instances.	Order made, S. 110.	Prosecution, SS. 109, 110.			
	Sending twice in the year.		Sending once in the year.			Failing to keep inspection of lists.	Failing to keep or sending lists.	Number of Addresses of Outworkers received from other Authorities.	Number of Addresses of Outworkers forwarded to other Authorities.	Notices served on Occupiers as to keeping or sending lists.								(11)	(12)	
	Lists.	Con- tractors.	Work- people.	Lists.	Con- tractors.															Work- people.
(1) Making, cleaning, washing, altering, ornamenting, finishing and repairing of wearing apparel .....	17	6	184	....	....	....	68	43	....	....	21	(13)	(14)	(15)	(16)	(17)	(18)	(19)		
Total.....	17	6	184	....	....	....	68	43	....	....	21		....	....	....	....	....	....		

\*(1) Making, cleaning, washing, altering, ornamenting, finishing and repairing of table linen, bed linen, or other household linen (including in the term linen articles of cotton or cotton and linen mixtures) ; (2) Making-up, ornamenting, finishing and repairing of table finishing of lace and of lace curtains and nets ; (3) Making, ornamenting, mending and of electro-plate ; (4) Making of curtains and furniture hangings ; (5) Cabinet and furniture making and upholstery work ; (6) Making of electro-plate ; (7) Making of files ; (8) Manufacture of brass and of any articles or parts of articles of brass (including in the term brass any alloy or com- pound of copper with zinc or tin) ; (9) Fur-pulling ; (10) Making of iron and steel cables and chains ; (11) Making of iron and steel anchors and grapnels ; (12) Making of cart gear, including swivels, rings, loops, gear buckles, mullin bits, hooks, and attachments of all kinds ; (13) Making of locks, latches and keys ; (14) Making or repairing of umbrellas, sunshades, parasols, or parts thereof ; (15) Making of artificial flowers ; (16) Making of nets other than wire nets ; (17) Making of tents ; (18) Making or repairing of sacks ; (19) Covering of racquet or tennis balls ; (20) Making of paper bags ; (21) Making of boxes or other receptacles or parts thereof, made wholly or partially of paper, cardboard, chip, or similar material ; (22) Making of brushes ; (23) Pea picking ; (24) Feather sorting ; (25) Carding, boxing, or packing of buttons, hooks and eyes, pins and hair pins ; (26) Making of stuffed toys ; (27) Making of baskets ; (28) Manufacture of chocolates or sweetmeats ; (29) The making or filling of cosques, Christmas crackers, Christmas stockings, or similar articles or parts of articles ; (30) The weaving of any textile fabric ; (31) Manufacture of lampshades other than lampshades made wholly of metal or glass or stone.

\* List of Industries as prescribed by Secretary of State.

Bakehouses.

Registered.....	269
Added to Register.....	7
Discontinued.....	3
Changed Hands.....	Nil.
Number of Underground Bakehouses Certified by Authority.....	Nil.
Total Number of Ovens.....	327
Employees—Males.....	215
,,      Females.....	529
Notices Served.....	7

Action taken.	No. of Defects found.	Notices served.	Legal Pro-ceedings.	Defects remedied	Remarks.
As to Closets, &c.....	....	....	....	....	
As to Water Cisterns .....	....	....	....	....	
As to Drain Openings .....	....	....	....	....	
As to Limewashing, &c. ....	26	6	....	26	
As to Sleeping Places.....	....	....	....	....	

Smoke Nuisance.

Particulars as to smoke nuisance caused by firms during the year 1938 and dealt with by the Health Committee :—

Three Notices were issued under the Public Health Act.

There were no legal proceedings taken.

During the year 3,114 smoke observations have been made as against 3,232 in the year 1937 and 1,897 in the year 1936.

89 stokers and others were cautioned by the Inspector for negligence in firing the furnaces under their charge, at the same time 14 firms were reported to and dealt with by the Health Committee, also 14 cautionary Notices were issued to firms with a table of smoke observations taken from their chimneys.

TABLE SHOWING THE NUMBER OF HALF-HOURLY OBSERVATIONS TAKEN DURING THE YEAR 1938.

Minutes of Black Smoke emitted in half-an-hour.	No. of Observations Taken.	Percentage to Total.
No Black Smoke.....	2,539	81·6
One Minute.....	561	18·0
Two Minutes.....	7	0·2
Three Minutes.....	—	0·0
Over Three Minutes.....	7	0·2
Total Observations.....	3,114	100·0

**Manure Receptacles, and Removal of Manure and other Offensive Matter.**

The Byelaws with respect to receptacles for manure and the weekly removal of the manure, filth, or other offensive or noxious matter, which came into operation towards the end of 1909, have been enforced during the past year, and special attention has been paid to stable yards where manure quickly accumulates.

The Byelaws as regards the regular removal of manure have been well observed.

**Canal Boats Acts.**

Number of canal boats inspected.....	120
Number of canal boats conforming to Acts.....	118
Number of canal boats with one or more infringements.....	2
Total number of infringements.....	2
Registration.....	—
Absence of certificates.....	—
Dilapidation of certificate.....	—
Marking.....	1
Overcrowding .....	—
Separation of sexes.....	—
Cleanliness.....	—
Ventilation.....	—
Ventilators obstructed.....	—
Painting.....	—
Provision of water vessel.....	—
Water vessels broken.....	—



Removal of bilge water.....	—
Boats defective and leaking.....	—
Dilapidation.....	—
Stoves defective.....	1
Stove pipes defective.....	—
Pumps defective.....	—
Admittance of Inspector.....	—
Notification of infectious disease.....	—
Certificates not identifying owners.....	—
Loading manure without tight bulkheads .....	—
Number of notices served.....	—
Other steps to secure compliance—Letters written to owners .....	—
Detention of boats for cleansing and disinfection.....	—
Legal proceedings taken.....	—
Number of boats on register : Not a Registration Authority.	
Canal boats registered to carry (number of persons).....	652
Men found on the boats.....	240
Women found on the boats.....	—
Children under 12 years found on the boats.....	—

### Drainage Inspection.

The examination and testing of all existing drains, and in certain instances sewers to which Section 24 of the Public Health Act, 1936, applies, is carried out by this Department. One Inspector is wholly occupied supervising repair or reconstruction where required. A driver and one man are employed to assist. The following table gives the detailed result of their labours :—

Number of tests made.....	1,089
„ „ examinations under Housing Act.....	89
„ „ houses affected by tests .....	1,775
„ „ Notices and reports issued .....	264
„ „ „ „ „ „ complied with .....	254
„ „ drain inlets opened and cleared.....	981

### INSANITARY DEFECTS FOUND.

Number of drains wholly or partly choked .....	111
„ „ „ defectively constructed .....	402
„ „ gully traps badly laid.....	69
„ „ „ „ defectively trapped.....	88
„ „ waste pipes defectively trapped or connected to drains.....	9
„ „ downspouts connected to drains .....	51
„ „ soil pipes with leaking joints or defectively ventilated	18
„ „ defective water-closets .....	39
„ „ Notices <i>re</i> sewers.....	65
„ „ premises affected.....	671

Number of drains repaired .....	413
„ „ „ reconstructed.....	685
„ „ „ trapped .....	618
„ „ discarded drains removed.....	205

NUMBER OF WASTE WATER-CLOSETS CONVERTED TO WATER-CLOSETS.

After service of Notice .....	27
Without service of Notice .....	13

**MODE WHEEL AMBULANCE AND DISINFECTING STATION.**

The Ambulance and Disinfecting Station situated in Mode Wheel Road is under the control of the Medical Officer of Health. The Station is used for the following purposes :—

(a) The disinfecting of bedding, clothing, etc., from the homes of persons suffering from infectious diseases by means of high-pressure steam disinfection.

(b) As a dépôt for the disinfectors employed in disinfecting houses, schools, and public institutions in which a case of infectious disease has occurred.

(c) As a station for the bathing of verminous persons and the disinfection of their clothing.

(d) The bathing of persons suffering from scabies (particularly school children), and the disinfection of their clothing.

(e) As a dépôt for the disinfection of the furniture, etc., of persons removed from Clearance Areas.

(f) The bathing of midwives who have been in contact with cases of puerperal fever, and the disinfection of their clothing and instruments.

(g) As a garage for the three motor ambulances required to take persons to and from Hospital and the three motor vans used to collect and deliver bedding, etc., before and after disinfection, and in connection with the cleansing of conveniences. The Station is also used as a repair dépôt for the whole of the motor vehicles used in the Department.

The Staff employed at the Station is as follows :—

Foreman.  
Caretaker.  
Motor Mechanic.  
Four Disinfectors.  
Four Drivers.

The following is a summary of the work done at the Mode Wheel Disinfecting Station during 1938 :—

#### AMBULANCES.

	Salford Cases.	Out-District Cases.	Total Cases.
Number of journeys removing patients to Hospital.....	1,300	628	1,928
Number of journeys removing patients from Hospital to their homes.....	369	118	487
Number of houses visited by ambulances removing bedding for disinfection.....	311	43	354

#### VANS.

Number of houses visited by vans returning bedding after disinfection.....	1,436	234	1,670
--	-------	-----	-------

Three hundred and fifty-one journeys were made in connection with the treatment of children suffering from scabies. In addition 208 journeys for other purposes were made by ambulances and 1,910 by vans.

#### DISINFECTIONS.

Number of houses disinfected.....	286
„ rooms disinfected.....	610
„ bundles of clothing and bedding disinfected.....	8,732*
„ books disinfected.....	365
„ schools disinfected.....	4
„ hospitals disinfected (occasions).....	7
„ rooms in ships disinfected.....	3

\* Including 2,961 for Hope Hospital and 1,617 in connection with tenants removed from Clearance Areas.

#### BATHING AND DISINFECTION OF CLOTHING.

Midwives.....	46
Smallpox convalescents.....	Nil.
Verminous persons.....	Nil.
Children suffering from scabies.....	1,775

The disinfection at the Mode Wheel Disinfecting Station of bedding and clothing from Hope Hospital was continued during 1938.



**MOTOR AMBULANCE SERVICES.**

The following is a summary of the Motor Ambulance Services provided in Salford during 1938 :—

**(1) HEALTH DEPARTMENT—**

Number of motor ambulances :—

(a) For Infectious Diseases .....	3
(b) „ Hope Hospital.....	1

The ambulances under (a) are stationed at the Mode Wheel Disinfecting Station, Weaste, and are used for conveying cases of infectious disease to and from the Ladywell Sanatorium, the Nab Top Sanatorium, and the homes of Salford residents. They are also used for a similar purpose, so far as the Ladywell Sanatorium only is concerned, in the case of a number of out-districts. In addition, they are used for conveying to their homes : (a) school children who have been operated upon for the removal of tonsils and adenoids, and (b) school children suffering from scabies who have been bathed at the Mode Wheel Disinfecting Station.

The ambulances under (b) are used for the conveyance of patients only, including maternity cases, to and from Hope Hospital.

As the Corporation have definite Agreements with the Corporations of Eccles, Farnworth, Irlam, Stretford and Urmston, for the treatment of cases of infectious disease from those areas in the Ladywell Sanatorium and Isolation Hospital, the ambulance service is now responsible for an area of approximately 23,100 acres, in which reside approximately 375,000 persons.

**(2) POLICE DEPARTMENT—**

Number of motor ambulances.....	4
---------------------------------	---

These ambulances are stationed at the Fire Station, Crescent, Salford. They are used primarily for accidents, but are also used occasionally for private cases.

I am of opinion that the ambulance facilities available in Salford are adequate.

**PROPAGANDA.**

The displays which have been given in the windows on the ground floor of the Health Offices in Regent Road, in previous years, were continued during 1938.

The National Health Campaign, which was inaugurated by the Ministry of Health in October, 1937, was continued during January, February and March, 1938, and the Department arranged for the further distribution of large quantities of posters and literature. In addition to the posters and literature distributed during 1937, the following distributions were made during the first three months of 1938 :—

Bookmarks (in co-operation with the Chief Librarian)	108,000
Folders (in co-operation with the Director of Education) .....	130,000
Posters for Schools (in co-operation with the Director of Education) .....	900
Mounted Showcards for exhibition in shops, offices, etc. ....	1,200
Posters .....	600

The arrangement, whereby addresses dealing with Public Health and other subjects are given to various organisations by members of the staffs of the Public Health and School Medical Departments, was continued during the early months of 1938. The addresses were well attended and apparently greatly appreciated.

**Swimming Baths.**

Samples of water from the Corporation's Swimming Baths were examined at frequent intervals throughout the year. The results of such examinations are to be found in the reports of the City Pathologist and the City Analyst, which appear on pages 155 and 159 of this volume.

**Sanitary Conveniences.**

There are 23 conveniences for Males and 5 for Females in the City, under the control of the Health Committee, and also 2 public conveniences for Males, and 2 for Females under the joint control of the Health Committee and Parks Committee, namely :—

SITUATION.	MALES.				FEMALES.		
	Urinal Stalls	Water Closets	Wash Basins	Attendant	Water Closets	Wash Basins	Attendant
Trinity Market.....	6	3	3	1	3	3	1
Trafford Road (Eccles New Road corner).....	15	4	4	1	....	....	....
Trafford Road (Ordsall Park)	12	4	6	1	....	....	....
Church Street (near the corner of Broad Street)....	10	2	3	1	3	3	1
Cross Lane.....	....	....	....	....	4	4	1
Oldfield Road (Corner of Chapel Street).....	6	....	....	....	....	....	....
Liverpool Street.....	4	....	....	....	....	....	....
Bolton Road (Junction of Claremont Road).....	6	....	....	....	....	....	....
Broughton Road.....	16	....	....	....	....	....	....
Windsor Bridge.....	6	....	....	....	....	....	....
Stevenson Street.....	3	....	....	....	....	....	....
Park Lane.....	5	....	....	....	....	....	....
Broad Street.....	3	....	....	....	....	....	....
Greengate Arch.....	6	....	....	....	....	....	....
Broughton Bridge.....	8	....	....	....	....	....	....
Frederick Road.....	4	....	....	....	....	....	....
Moor Lane.....	6	....	....	....	....	....	....
Cemetery Road.....	6	....	....	....	....	....	....
Cross Lane.....	5	....	....	....	....	....	....
Langworthy Road.....	4	....	....	....	....	....	....
Albert Park.....	6	....	....	....	....	....	....
Crescent, near Victoria Arch.	6	....	....	....	....	....	....
Charlestown Recreation Ground .....	4	2	....	....	2	....	....
Mandley Park .....	4	3	....	....	3	....	....



TABLE G 3.

CASES HEARD BEFORE THE MAGISTRATES DURING 1938.

Offence.	No. of Cases.	Decision of Magistrates.	Total Fines (without costs).
PUBLIC HEALTH ACTS.			
For failing to comply with the requirements of Notices under the Public Health Act, 1936, to abate Nuisances arising from sanitary defects in dwellinghouses.	5	1 Withdrawn. 1 Fined £2 0s. 0d. and £1 1s. 0d. costs. 1 Fined £1 0s. 0d. and £1 1s. 0d. costs. 2 Fined 10s. 0d. and 10s. 0d. costs.	£ s. d. 4 0 0
For having unsound meat deposited for preparation for sale for human consumption.	1	Fined £24 0s. 0d.	24 0 0
For allowing trade refuse to accumulate on food preparing premises.	1	Fined £20 0s. 0d.	20 0 0
For allowing food preparing premises to be in a filthy condition.	1	Fined £4 0s. 0d.	4 0 0
For failing to provide a sufficient number of receptacles for refuse at food preparing premises.	1	Fined £4 0s. 0d.	4 0 0
For failing to empty receptacles for refuse deposited at food preparing premises.	1	Fined £4 0s. 0d.	4 0 0
For keeping a dog at food preparing premises in the room where food was prepared.	1	Fined £4 0s. 0d.	4 0 0
Appeal to High Court against dismissal of Appeal to Quarter Sessions and against conviction in Court of Summary Jurisdiction for contraventions of the provisions of the Public Health Act and Salford Improvement Act, in respect of sanitary defects at a dwellinghouse.	1	Appeal dismissed. Costs awarded to the Corporation.	— — —
HOUSING ACT.			
Being the tenant of a dwellinghouse situated in a Clearance Area failing to comply with a Notice to Quit the premises for the purpose of demolition in accordance with a Clearance Order.	1	Warrant granted for vacant possession of the premises to be given within four weeks.	— — —
Carried forward .....	13		£64 0 0

CASES HEARD BEFORE THE MAGISTRATES DURING 1938—*continued*.

Offence.	No. of Cases.	Decision of Magistrates.	Total Fines (without costs).
Brought forward.....	13		£ 64 s. 0 d.
FOOD AND DRUGS ACT.			
For selling stainless Iodine Ointment to the prejudice of the purchaser.	1	Fined 5s. 0d.	0 5 0
For aiding and abetting, counselling and procuring the committing of the above offence.	1	Fined £5 0s. 0d. and £3 3s. 0d. costs.	5 0 0
For applying a false label in connec- tion with the sale of Stainless Iodine Ointment.	1	Dismissed.	— — —
For selling Strawberry Jam not of the nature, substance and quality of the article demanded.	1	Dismissed.	— — —
For applying a false warranty in con- nection with the sale of Strawberry Jam.	1	Dismissed on pay- ment of £3 3s. 0d. costs.	— — —
For selling Stainless Iodine Ointment deficient of 60% of iodine.	1	Fined £1 0s. 0d. and 10s. 0d. costs.	1 0 0
For selling Eccles Cakes alleged to have been made with pure butter, which on analysis, were found to be deficient in butter content.	1	Dismissed.	— — —
For aiding and abetting, counselling and procuring the committing of the above offence.	2	1 Fined £5 0s. 0d. and £2 2s. 0d. costs. 1 Fined £2 10s. 0d.	7 10 0
For selling Milk deficient of butter-fat.	2	1 Fined 10s. 0d. and £1 1s. 0d. costs. 1 Fined £5 0s. 0d. and £4 9s. 2d. costs.	5 10 0
For selling Bread and Butter, deficient of 94% butter (being margarine).	1	Fined £1 0s. 0d.	1 0 0
For selling Eccles Cakes alleged to have been made with pure butter, which on analysis, were found to be deficient of 60% of butter.	1	Dismissed.	— — —
Carried forward .....	26		£84 5 0

CASES HEARD BEFORE THE MAGISTRATES DURING 1938—*continued*.

Offence.	No. of Cases.	Decision of Magistrates.	Total Fines (without costs).
Brought forward .....	26		£ 84 s. 5 d. 0
For aiding, abetting, counselling and procuring the committing of the above offence.	1	Dismissed on payment of £2 2s. 0d. costs.	— — —
For applying a false label in connection with the sale of Eccles Cakes.	1	Dismissed on payment of £2 2s. 0d. costs.	— — —
For selling Stainless Iodine Ointment deficient of 58% iodine.	1	Fined 10s. 0d.	0 10 0
For aiding, abetting, counselling and procuring the committing of the above offence.	1	Fined £1 0s. 0d. and £2 12s. 6d. costs.	1 0 0
PHARMACY AND POISONS ACT.			
For selling Poison included in Part 2 of the Poisons List and not being a Listed Seller.	4	2 Fined £1 0s. 0d. and £1 1s. 0d. costs. 2 Fined 10s. 0d.	3 0 0
For selling Poison included in Part 2 of the Poisons List in a container not bearing the name and address of the seller.	4	1 Fined £1 0s. 0d. 3 Fined 10s. 0d.	2 10 0
For packing Ammonia in a container not declaring the quantity of Poison in proportion to the total ingredient.	1	Fined £5 0s. 0d. and £1 1s. 0d. costs.	5 0 0
For packing Phenol Disinfectant in a container not declaring the quantity of Poison in proportion to the total ingredient.	1	Fined £5 0s. 0d. and £1 1s. 0d. costs.	5 0 0
MILK AND DAIRIES (CONSOLIDATION) ACT.			
For allowing a milk roundsman to uncap bottles to exchange milk after leaving registered premises and before delivery to the consumer: (1) For filling bottles on un-registered premises. (2) For removing discs from bottles.	2	1 Fined £2 0s. 0d. and £1 1s. 0d. costs. 1 Fined £1 0s. 0d.	3 0 0
Carried forward .....	42		£104 5 0



CASES HEARD BEFORE THE MAGISTRATES DURING 1938—*continued*.

Offence.	No. of Cases.	Decision of Magistrates.	Total Fines (without costs).
Brought forward .....	42		£ 104 s. 5 d. 0
SHOPS ACTS.			
For selling provisions after the time prescribed by the general closing hours.	10	5 Fined £1 0s. 0d. 2 Fined 10s. 0d. 1 Fined £1 0s. 0d. and £1 1s. 0d. costs. 1 Fined £1 0s. 0d. and 10s. 0d. costs. 1 Fined £4 0s. 0d. and £1 1s. 0d. costs.	12 0 0
For keeping the shop open on the Weekly Half-holiday.	3	2 Fined 10s. 0d. 1 Dismissed on pay- ment of 4s. 0d. costs.	1 0 0
For not exhibiting a Notice specify- ing the day of the Weekly Half- holiday in connection with a shop.	1	Dismissed on pay- ment of 4s. 0d. costs.	— — —
For selling provisions on Sunday.....	4	1 Fined £1 0s. 0d. 1 Fined £1 0s. 0d. and 10s. 0d. costs. 1 Fined 10s. 0d. and £1 1s. 0d. costs. 1 Fined 10s. 0d. and 4s. 0d. costs.	3 0 0
For selling firelighters after the General Closing Hours.	1	Fined £2 0s. 0d.	2 0 0
For failing to exhibit at a shop the Prescribed Form of Notice showing the Assistants' Weekly Half-holiday.	3	2 Fined 10s. 0d. 1 Fined £1 0s. 0d.	2 0 0
For failing to allow a shop assistant to have a Weekly Half-holiday.	4	1 Fined £1 0s. 0d. 2 Fined 10s. 0d. 1 Dismissed on pay- ment of 4s. 0d. costs.	2 0 0
For failing to allow a shop assistant an interval for tea.	3	2 Fined 10s. 0d. 1 Dismissed.	1 0 0
For employing an assistant on more than 3 Sundays in a month when such assistant had been employed for over 4 hours on one Sunday in the same month.	1	Fined £1 0s. 0d.	1 0 0
Total.....	72		£128 5 0

**Shops Acts, 1912 to 1936.**

The administration of these Acts involved a considerable amount of extra work particularly in regard to the securing of compliance with the law regarding compensatory holiday for Sunday employment in shops.

I have again to thank the Chief Constable and his staff for their co-operation in the enforcement of the early closing of shops and of the restriction of Sunday trading.

The increased legislation in connection with the distributive trade has naturally created considerably more work, but, nevertheless, the Shops Acts Inspector continued his survey of shops in connection with sanitary conditions and the employment of "young persons" and the progress made will be appreciated by an examination of the appended tables.

The supervision of shops to enforce half-day closing, early closing and the statutory weekly half-holidays was maintained and the high standard of administration preserved.

With the failure of the plebiscite taken at the beginning of the year with a view to a Partial Exemption Order being made, the further prohibition (respecting the sale of bread and flour, confectionery, fish and groceries on Sundays) came into operation in February. This entailed extra supervision in which the Chief Constable and his staff co-operated. The reluctance to comply with these further restrictions was mainly by occupiers of "mixed" shops, and these, generally speaking, with few exceptions, realised their obligations when interviewed.

In July, following an application from the Motor Agents' Association for an Order under the 1912 Act, an order was made exempting shops from the necessity of closing for the sale of motor cars and motor cycles on any week-day at 1-0 p.m. The Order had the support of 96 per cent. of the traders concerned.

CITY OF SALFORD.

SHOPS ACT, 1912.

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**MOTOR TRADERS EXEMPTION ORDER, 1938.**

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The Council of the City of Salford, in pursuance of the powers conferred upon them by the Shops Act, 1912,

**DO HEREBY ORDER**

as follows :—

- (1) THIS ORDER shall come into force on the Twenty-seventh day of July, 1938, and may be cited as the "Motor Traders Exemption Order, 1938," and shall apply to all shops in the City of Salford in which the sale by retail of Motor Cars and Motor Cycles and parts and accessories thereof is carried on.

- (2) SHOPS to which this Order applies are hereby EXEMPT from the provisions of Section 4 (1) of the Shops Act, 1912, so far as the sale by retail of Motor Cars and Motor Cycles and parts and accessories thereof is carried on in such shops.

Dated this Twenty-seventh day of July, 1938.

H. H. TOMSON,  
Town Clerk.

TOWN HALL,  
SALFORD.

Section 4 (1) of the Shops Act, 1912, referred to in the Order provides as follows :—

“ Every shop shall, save as otherwise provided by this Act, be closed for the serving of customers not later than one o'clock in the afternoon on one week-day in every week.”



CONTRAVENTIONS OF SECTION 10 OF THE SHOPS ACT, 1934.

Particulars.		No. of contraventions found.	No. remedied following communication.
1.	Non-provision of suitable and sufficient means of ventilation .....	24	20
2.	" " " means to maintain a reasonable temperature .....	47	33
3.	" " " sanitary conveniences (or inadequate main- tenance of same).....	131	90
4.	" " " washing facilities (or inadequate mainten- ance of same) .....	74	46
5.	" " " means of lighting (or inadequate mainten- ance of same) .....	33	30
6.	" " " facilities for the taking of meals by the employees (or inadequate maintenance of same).....	46	33

LEGAL PROCEEDINGS TAKEN.

Particulars.		No. of Summonses issued.
1.	For selling provisions after the general closing hours .....	11
2.	For selling provisions on Sundays.....	4
3.	For keeping the shop open on the weekly half-holiday .....	3
4.	For failing to exhibit the Prescribed Form as to assistants' weekly half-holiday.....	3
5.	For failing to allow half-holidays to assistants.....	4
6.	For failing to allow intervals for meals to assistants.....	3
7.	For illegally employing an assistant on Sunday.....	1
8.	For not exhibiting a notice specifying the weekly half-holiday in connection with a shop.....	1

INSPECTIONS.	No. of Summonses issued.
Number of visits paid to shops in connection with half-day closing .....	7,583
Number of visits paid to shops in connection with early closing .....	1,214
Number of visits paid to shops in connection with Sunday closing .....	2,115
Number of shops surveyed in connection with the employment of young persons and in connection with sanitary arrangements, etc. ....	1,058
Number of Certificates of Exemption granted from the provision of sanitary conveniences and washing facilities within shop premises .....	26
Number of shops occupied by Jews registered under Section 7 for carrying on business on Sunday.....	29

CONTRAVENTIONS OF SHOPS ACTS, 1912-1936.

Particulars.	Written.	Subsequent compliance.
Non-exhibition of forms and records required in connection with shop assistants, particularly " young persons "	142	109
Non-exhibition of forms and records required in connection with Sunday trading and Sunday employment.....	62	55
Contraventions of half-day closing .....	14	14
"       "   early closing.....	3	3
"       "   Sunday trading .....	3	3
"       "   of weekly half-holiday for shop assistants .....	2	2
Contraventions <i>re</i> provision of proper meal times for shop assistants .....	4	3
"       "   provision of seats for female shop assistants .....	4	3
"       "   restriction of maximum weekly working hours for " young persons " .....	3	3

**Housing Conditions.**

YEAR ENDED 31ST DECEMBER, 1938.

*(a)* GENERAL STATISTICS.

Area (acres).....	5,202
Population (1937) (Registrar General's Estimate).....	201,800
Number of Houses .....	53,605
Rateable Value (1938-1939).....	£1,134,953
Sum represented by a penny rate (Estimate).....	£4,300

**(B) HOUSING STATISTICS.**

## 1. Inspection of dwellinghouses during the year :—

1. *(a)* Total number of dwellinghouses inspected for housing defects  
(under P.H. or Housing Acts)..... 9,615
- (b)* Number of inspections made for the purpose..... 20,487
2. *(a)* Number of dwellinghouses (included under sub-head (1)  
above) which were inspected and recorded under the Housing  
Consolidated Regulations, 1925..... Nil.
- (b)* Number of inspections made for the purpose..... Nil.
3. Number of dwellinghouses found to be in a state so dangerous  
or injurious to health as to be unfit for human habitation..... 311
4. Number of dwellinghouses (exclusive of those referred to under  
the preceding sub-head) found not to be in all respects reasonably  
fit for human habitation..... 6,140

2. Remedy of defects during the year without service of formal Notices :—  
Number of defective dwellinghouses rendered fit in consequence of  
informal action by the Local Authority or their officers..... 1,699

## 3. Action under Statutory Powers during the year :—

*A.* Proceedings under Sections 9, 10 and 16 of the Housing Act, 1936 :

1. Number of dwellinghouses in respect of which notices were  
served requiring repairs..... 293
2. Number of dwellinghouses which were rendered fit after  
service of formal notices :—
  - (a)* by owners..... 186
  - (b)* by Local Authority in default of owners..... 59



*B. Proceedings under Public Health Acts :*

1. Number of dwellinghouses in respect of which notices were served requiring defects to be remedied..... 2,244
2. Number of dwellinghouses in which defects were remedied after service of formal notices :—
  - (a) by owners..... 1,703
  - (b) by Local Authority in default of owners..... Nil.

*C. Proceedings under Sections 11 and 13 of the Housing Act, 1936 :*

1. Number of dwellinghouses in respect of which Demolition Orders were made..... 6
2. Number of dwellinghouses demolished in pursuance of Demolition Orders..... 6

*D. Proceedings under Section 12 of the Housing Act, 1936 :*

1. Number of separate tenements or underground rooms in respect of which closing orders were made..... 2
2. Number of separate tenements or underground rooms in respect of which closing orders were determined, the tenement or room having been rendered fit..... Nil.

*E. Works executed on Owners' Undertakings (additional to the foregoing items).*

During the year approval was given to schemes submitted by owners of unfit properties in anticipation of Council action under Part II or Part III of the Housing Act, 1936.

The number of houses concerned was 28. Of these 6 were demolished, 1 closed and 21 were made fit.

FITNESS OF HOUSES.

No special difficulties have been found in action under the Public Health Acts. The property owners in general show a disposition to comply with the Notices served under these Acts.

**Housing Act, 1936, Part IV—Overcrowding.**

(a) (i)	Number of dwellings overcrowded at the end of the year	1,249
(ii)	Number of families dwelling therein .....	1,249
(iii)	Number of persons dwelling therein .....	6,931½
(b)	Number of new cases of overcrowding reported during the year .....	Nil.
(c) (i)	Number of cases of overcrowding relieved during the year .....	457
(ii)	Number of persons concerned in such cases .....	2,811½

**Clearance Orders and Re-housing.**

Nine Clearance Orders were made by the City Council in 1938, involving a total of 275 unfit dwellinghouses.

The areas dealt with were :—

Dean Road Area.  
 Greengate No. 2 Area.  
 James Street Area.  
 Back Gold Street Area.  
 Bury Street Area.  
 Goodiers Buildings Area.  
 John's Street Area.  
 Britannia Street Area.  
 Caygill Street Area.

There were 1,041 persons occupying the buildings and the number of families concerned was 291.

Eight orders were confirmed by the Minister of Health ; the Britannia Street Order being quashed by the Minister who approved the owners' alteration scheme for altering and improving the property.

The following is a summary of the actual clearance and re-housing operations during 1938 :—

Number of persons actually displaced .....	970
„ „ houses vacated.....	243*
„ „ houses demolished .....	316
„ „ new dwellings occupied .....	235

\*This figure includes a number of houses vacated late 1937.

At the end of the year removal of displaced families was still proceeding.

The new properties are situated at the Langworthy Estate at Weaste (flats), at the Duchy Road and Summerville Estates at Pendleton (houses) and at the Salford Brow Estate at Strangeways (flats). The latter scheme is a public utility society project.

All removals to new dwellings, disinfestation of furniture and household effects by means of hydrocyanic acid gas fumigation and steam disinfection of bedding have been arranged and carried out at the expense of the Council.

Vacated houses have been cleansed from vermin by treatment with hydrocyanic acid gas, prior to demolition.

Removals and fumigations were carried out by Contractors.

### Reconditioning of Dwellinghouses under Housing Act, 1936.

Inspections of dwellinghouses have been carried out under the Housing Act, 1936, with a view to the reconditioning of those houses found to be in a state of general disrepair and yet capable of being rendered fit at a reasonable cost, having regard to the estimated value of the houses on completion of the repairs.

Notices were served in respect of 293 houses and in each case a complete specification of the works required, giving details of the materials to be used, etc., was issued with the Notice.

During the year 186 houses were rendered fit by the owners of the property. In addition, 59 houses were rendered fit by the Corporation in default of compliance with Notice; in these cases the Corporation is recovering the costs incurred in accordance with the provisions of the Housing Act.

It is intended to pursue this policy of reconditioning in the case of all suitable property, with a view to a general standard of fitness being attained.

### Eradication of Bed Bugs.

During the year measures for disinfestation were carried out in a total of 481 dwellinghouses.

Number of Council houses found to be infested .....	131
„ „ of other houses found to be infested.....	350
„ „ Council houses disinfested .....	131
„ „ other houses disinfested .....	350

In the case of Council houses, disinfestation has been carried out by means of Hydrocyanic Acid Gas and Liquid Spray. Second and third visits were made in order to ascertain whether further incubations had taken place.

Number of Council houses disinfested with hydrocyanic acid gas .....	66
„ „ Council houses disinfested with spray.....	65

Hydrocyanic acid gas was used in the case of an estate found to be seriously infested with bugs and beetles.

The spray insecticide used for disinfestation of Council houses was "Vermus" which, generally speaking, has proved effective, particularly in instances where the tenant has made every effort to assist.



All families from Clearance Areas who have been re-housed in Council houses have had their furniture and effects treated en route to the new buildings, hydrocyanic acid gas being applied to furniture in specially constructed vans and all bedding steam disinfected

This practice has been extended to apply when any Corporation house is relet if there is reason on inspection to suspect that the selected tenant is leaving a verminous house.

Houses vacated as a result of the operation of Clearance Orders were, whenever practicable, cleansed from vermin prior to demolition by the application of hydrocyanic acid gas.

Treatment by hydrocyanic acid gas has been carried out by an experienced private firm under Contract with the Council.

TABLE G. 2.

NEW HOUSES ERECTED AND HOUSES DEMOLISHED IN 1938.

Wards.	Houses and Flats erected.		Houses demolished.
Kersal.....	126	....	—
Albert Park.....	1	....	—
Mandley Park.....	8	....	—
St. Matthias'.....	—	....	28
Trinity.....	1	....	59
Crescent.....	1	....	137
Regent.....	—	....	33
Ordsall Park.....	—	....	—
Docks.....	146	....	—
Charlestown.....	—	....	4
St. Thomas'.....	—	....	69
St. Paul's.....	—	....	11
Langworthy.....	—	....	—
Seedley.....	12	....	—
Weaste.....	196	....	—
Claremont.....	134	....	—
	—		—
	625	....	341
	—		—

453 houses have been built by private enterprise.

172     „     „     „     „     „     the Corporation.

TABLE G. 4.

REGISTER OF WORK DONE—YEAR ENDING DECEMBER 31st, 1938.

No. of Complaints received.....		5565	
Inspections of	Dwellinghouses .....	9615	
	"      "      (under Housing, &c., Act)....	625	
	Visits <i>re</i> Unhealthy Areas.....	1750	
	Schools.....	62	
	Factories.....	804	
	Canal Boats.....	120	
	Common Lodging-houses (Day).....	209	
	"      "      "      (Night).....	—	
	Sub-let      "      "      (Day).....	853	
	"      "      "      (Night).....	30	
	Seamen's Lodging-houses (Day).....	30	
	Van Dwellings.....	56	
	Tips.....	26	
	Bakehouses (Day).....	144	
	Outworkers' Premises.....	21	
	Ice Cream Shops.....	299	
	"      Stalls.....	61	
	Miscellaneous.....	4961	
	Urinals—Public.....	471	
	Stables.....	137	
	<i>Re</i> Infectious Diseases.....	831	
	Theatres, Cinemas, &c. (Day).....	51	
	"      "      (Night).....	—	
	Shops {	(Shops Act) <i>re</i> Half-Day closing.....	7583
		"      " <i>re</i> Early Closing.....	1214
		"      " <i>re</i> Sanitary	
		arrangements, etc.	1058
		"      " <i>re</i> Sunday Trading	
		Restrictions .....	2115

REGISTER OF WORK DONE.—*continued.*

Re-inspections.....	20487
Public Health Act, 1936, Section 93 issued ....	1742
"    "    "    "    "    " complied with....	1304
"    "    "    "    "    " cancelled	91
"    "    "    "    Section 75 issued ....	412
"    "    "    "    "    " complied with....	265
"    "    "    "    "    " cancelled	28
"    "    "    "    Section 56 issued ....	174
"    "    "    "    "    " complied with....	63
"    "    "    "    "    " cancelled	8
"    "    "    "    Section 45 issued ....	42
"    "    "    "    "    " complied with....	32
"    "    "    "    "    " cancelled	—
"    "    "    "    Section 44 issued ....	123
"    "    "    "    "    " complied with....	27
"    "    "    "    "    " cancelled	42
"    "    "    "    Section 39 issued ....	474
"    "    "    "    "    " complied with....	345
"    "    "    "    "    " cancelled	8
"    "    "    "    Section 24 issued ....	135
"    "    "    "    "    " complied with....	95
"    "    "    "    "    " cancelled	5
"    "    "    "    Informal issued.....	2192
"    "    "    "    "    " complied with .....	1496
"    "    "    "    "    " cancelled ..	102
Factories Act, 1937, issued .....	70
"    "    "    " complied with .....	52
"    "    "    " cancelled.....	—
Shops Act, 1934, issued .....	355
"    "    "    " complied with .....	252
"    "    "    " cancelled .....	2
TOTALS	<div> { issued ..... 5719 complied with ..... 3931 cancelled ..... 286 } </div>



REGISTER OF WORK DONE.—*continued.*

Disinfection—Rooms in Houses, etc. Disinfected.....	610
House Drains {	
Repaired.....	413
Reconstructed.....	685
Trapped.....	618
Downspouts disconnected from.....	51
Blockages removed.....	111
Passages and Yards. {	
Inlets opened.....	981
Water-closets {	
New, provided.....	46
Ventilated.....	30
Ash Receptacles {	
New, provided.....	184
Bricked up or demolished.....	22
Cleansed, Limewashed, or Redecorated {	
Lodging-houses .....	8
„ Sub-let.....	134
„ Seamen's.....	6
Bakehouses.....	93
Factories.....	83
Outworkers' premises.....	—
Newly Licensed Common Lodging-houses.....	8
„ „ Seamen's „ .....	6
Newly Registered {	
Lodging-houses Sub-let.....	18
Bakehouses.....	7
Second-hand Goods Stores.....	14
Ice Cream Shops.....	8
Accumulations Removed {	
Manure and Refuse.....	7
Stagnant Water.....	—
Manure Receptacles—New, provided.....	—
Smoke Nuisance {	
Observations taken.....	3114
Notices served.....	3
Cautionary Notices served.....	14
Passages and Yards {	
Repaired.....	83
Bundles of Infected Bedding and Clothing {	
Stoved.....	8732
Destroyed.....	86
Houses repaired by owners, after Formal Notice.....	2537
„ „ „ „ „ Informal „ .....	1699

**Destruction of Rats and Mice.**

I am indebted to the Director of Public Cleansing, Salford for the following information, namely :—

During the year the ratcatchers made 7,862 visits to dwellinghouses, schools, shops, stores and other premises, whilst 2,038 live rats were caught.

Damage by rats to sanitary fittings, floors, etc., in many cases necessitated structural repairs to property and these repairs were carried out by the agents and owners of the premises.

The controlled tips and depôts of the Department are kept under constant supervision and means are taken to prevent the aggregation of rats.

In addition to the continuous work carried out by the two ratcatchers employed by the Department, extra efforts in connected with Rat Week are made including the following :—

Two weeks prior to Rat Week an advertisement was inserted in the local paper notifying the public of this effort, asking for co-operation and stating that assistance will be given free of charge. This was emphasised by an article on the destruction of rats and mice and on information supplied by this Department.

Large posters were displayed on the hoardings of the City. Handbills were distributed from house to house and the Ministry's poster exhibited in the display window of the Health Department, on the notice boards of the Public Parks and Libraries, in the windows of shops on the main thoroughfares and on the vehicles of the Department.

There were not many new complaints received during Rat Week as the publicity given the work of rat destruction during the last few years has helped to make the activities of the Department well known ; consequently there is a steady flow of requests for assistance throughout the year.

Ear, Nose and Throat.

2	Cardio-vascular, Genito-Urinary.	13	Artificial Sunlight.	4	Dental.	256	Gynaecological.	Psychiatric.	Diabetic.	Massage.	also provided.			
13	Cardio-vascular.	4	Physiotherapeutic.	4	Dental.	256	Gynaecological.	Psychiatric.	Diabetic.	Massage.		296	40	
192	X-Ray (with Light Therapy and Deep Therapy).	365	Massage (with Diathermy, Electro-therapy, Radiant Heat, etc.) ; Sunlight.	21	Dietetics.	Electrocardiographic.	Surgical Tuberculosis.	Veneral Diseases.	Ophthalmic.	Skin Diseases.	Neurological Surgery.	Orthopaedics.	Gynaecology.	Plastic Surgery.
101	Radium.	162	Ante-natal and Post-natal.	50	Hormone Clinic.	Artificial Sunlight.	Veneral Diseases (Out-Patients only).	313	X-Ray.	Massage (with Electrical and Gymnastic Apparatus).	Artificial Sunlight.	Orthopaedic.	Ear, Nose and Throat.	Pathological.
232	Pathological.	Dental Clinic (Out-patient Clinics	Speech Clinic) in Manchester.	15	X-Ray.	Massage.	Pathological.	43	Cardiographic.	Orthopaedic.	Ear, Nose and Throat.	Veneral Diseases.	Neurological.	Erollogical.
77				15	X-Ray.	Massage.	Pathological.	43	Cardiographic.	Orthopaedic.	Ear, Nose and Throat.	Veneral Diseases.	Neurological.	Erollogical.
110	X-Ray.	Massage (with Electrical and Gymnastic Apparatus).	Artificial Sunlight.	12	Orthopaedic.	Ear, Nose and Throat.	Pathological.	232	Dental Clinic (Out-patient Clinics	Speech Clinic) in Manchester.	15	X-Ray.	Massage.	Pathological.
649				26	Gynaecology.	Plastic Surgery.	649							
101	Radium.	162	Ante-natal and Post-natal.	50	Hormone Clinic.	Artificial Sunlight.	Veneral Diseases (Out-Patients only).	313	X-Ray.	Massage (with Electrical and Gymnastic Apparatus).	Artificial Sunlight.	Orthopaedic.	Ear, Nose and Throat.	Pathological.
110	X-Ray.	Massage (with Electrical and Gymnastic Apparatus).	Artificial Sunlight.	12	Orthopaedic.	Ear, Nose and Throat.	Pathological.	43	Cardiographic.	Orthopaedic.	Ear, Nose and Throat.	Veneral Diseases.	Neurological.	Erollogical.
232	Pathological.	Dental Clinic (Out-patient Clinics	Speech Clinic) in Manchester.	15	X-Ray.	Massage.	Pathological.	43	Cardiographic.	Orthopaedic.	Ear, Nose and Throat.	Veneral Diseases.	Neurological.	Erollogical.
77				15	X-Ray.	Massage.	Pathological.	43	Cardiographic.	Orthopaedic.	Ear, Nose and Throat.	Veneral Diseases.	Neurological.	Erollogical.
151	Erollogical.			10	Veneral Diseases.	Ear, Nose and Throat.	Neurological.	151	Erollogical.					
18	X-Ray.	Artificial Sunlight.	Massage.	8	Artificial Sunlight.	Gynaecological.	X-Ray.	18	X-Ray.	Massage.	Artificial Sunlight.	8	Artificial Sunlight.	X-Ray.
32	Ear, Nose and Throat.	Ophthalmic.	Massage and Electrical.	10	General Medical.	Cardiograph.	3	General Medical.	Cardiograph.	8		24		
103	Dental.	X-Ray.	Massage.	18	Artificial Sunlight.	Gynaecological.	X-Ray.	18	Artificial Sunlight.	Gynaecological.	X-Ray.	103	Dental.	X-Ray.
22	X-Ray.	Massage.	Artificial Sunlight.	18	Pathological.	Ear, Nose and Throat.	22	Pathological.	Ear, Nose and Throat.	Electrocardiograph.	33	18		
113				54	Artificial Sunlight.	Veneral Diseases of Skin.	54	Artificial Sunlight.	Veneral Diseases of Skin.	Private Wards.	22			
22				9			9				31			
Nil	Oral Surgery.	(conservative.	Prosthetic.	Orthodontic.	Anaesthetic and Extraction.	X-Ray.	139	Pathological.	Ophthalmic.	Neurological.	26	3		
9							9							
177							177							
145	Private wards for paying patients.	Deep X-Ray Therapy.	Pathological.	Physicist.	Radium application and research.	Out-patients and follow-up department.	Record and Statistical department.	145						

USED BY SALFORD RESIDENTS.

Special Departments.

NOTE.—It should be clearly understood that the accommodation provided by Voluntary Hospitals referred to in the above summary is available for the residents of Manchester and neighbouring areas.





**(C)—GENERAL PROVISION OF HEALTH SERVICES.****Hospital Services.**

The people of Salford avail themselves of the hospital accommodation provided by the Salford Corporation and of the voluntarily provided hospitals of both Salford and Manchester. The interleaved tabulation contains particulars of the hospital services available for Salford residents, distinguishing between hospitals provided by the Corporation and voluntary institutions.

**Outdoor Assistance to the Poor.**

The amount distributed by way of outdoor assistance to the poor in Salford during the year ending March 31st, 1939, was approximately £127,324.

Particulars relating to the Poor Law Medical Out-relief Districts are set out in the appended tabulation :—

**MEDICAL OUT-RELIEF DISTRICTS.**

No. of District.	Area served.	District Medical Officer.
1.	<i>District</i> —Such portion of the former Township of Salford as is comprised within the following boundary :—Commencing at a point in the River Irwell at the Salford Royal Hospital end of the Crescent, easterly along Whitecross Bank and Chapel Street, thence along St. Stephen Street, King Street, Norton Street, and Greengate to the River Irwell at the Salford Bridge ; thence to the left along the River Irwell and the pre-existing Township boundary to the point first named.	Dr. S. Snelson
2.	<i>District</i> —All that part of the former Township of Salford comprised within the following boundary :—Commencing at Windsor Bridge, and thence along the Manchester, Bury and Bolton Canal to the pre-existing boundary of the Townships of Salford and Pendleton, along such boundary through Peel Park to the River Irwell, along the River Irwell to a point nearest the Crescent, thence along the Crescent and Chapel Street to St. Stephen Street, along St. Stephen Street, King Street, Norton Street, Greengate and Chapel Street to Salford Bridge, to the right along the River Irwell to the Manchester, Bury and Bolton Canal, and along such Canal to the point first named.	Dr. S. Snelson

MEDICAL OUT-RELIEF DISTRICTS—*continued.*

No. of District.	Area Served.	District Medical Officer.
3.	<i>District</i> —All that part of the former Township of Salford comprised within the following boundary, viz. :—Commencing at Regent Bridge, along the centre of Regent Road, Trafford Road, and Broadway, to the site of the old Racecourse, thence along the northern boundary of such site to the Manchester Ship Canal, thence along the said Ship Canal and the River Irwell to the point first named.	Dr. W. Saunderson.
4.	<i>District</i> —Commencing at Windsor at the point dividing the former Townships of Pendleton and Salford, thence along the pre-existing Township boundary to the Manchester, Bury and Bolton Canal, along such Canal in a south-easterly direction to the River Irwell, along the River Irwell to Regent Bridge, thence along Regent Road to Trafford Road, along Trafford Road and Broadway and the north-west side of the site of the old Racecourse to the Manchester Ship Canal, along the said Ship Canal to the boundary of the former Townships of Pendleton and Salford; and thence along such boundary to the point first named.	Dr. W. Saunderson.
5.	<i>District</i> —The whole of the former Township of Pendleton.	Dr. J. Garlick.
6.	<i>District</i> —The whole of the former Township of Broughton.	Dr. J. Libman.

Dr. J. D. Giles is appointed Medical Officer for Outdoor Relief Services. This service is administered by the Public Assistance Committee.

**Hospital Accommodation.**

Consultations with representatives of Voluntary Hospitals did not take place during 1938, as no additional provision for hospital accommodation was made during the year.



**Vaccination.**

No primary vaccinations or re-vaccinations were performed by the Medical Officer of Health under the Public Health (Smallpox Prevention) Regulations, 1917, during 1938.

The Public Vaccinators for Salford and their districts are as follows :—

Description.	District.	Public Vaccinator.
Salford (No. 1) District.	Such part of the Township of Salford as is comprised within the following boundary, namely: Commencing at the former Township boundary between Pendleton and Salford at Broad Street; along Windsor and the Crescent to Oldfield Road; along Oldfield Road to Regent Road; along Regent Road to Regent Bridge; thence in a northerly and westerly direction along the River Irwell to the boundary between the former Townships of Salford and Pendleton near Peel Park; thence along the boundary between such former Townships to the point first named.	Dr. V. Newton, 227, Oldfield Road, Salford, 5.
Salford (No. 2).....	Such part of the Township of Salford as is comprised within the following boundary, namely: Commencing at the boundary of the former Townships of Salford and Pendleton at New Windsor, Salford; along New Windsor and the Crescent to Oldfield Road; along Oldfield Road to Regent Road; along Regent Road to the River Irwell at Regent Bridge; thence in a southerly and westerly direction along the River Irwell and the Manchester Ship Canal to the boundary between the former Townships of Pendleton and Salford; thence along the boundary between such former Townships to the point first named.	Dr. W. Saunderson, 1, Haworth Street, Cross Lane, Salford, 5.

Description.	District.	Public Vaccinator.
Pendleton District (Salford Township).	The whole of the former Township of Pendleton.	Dr. E. A. Ferguson, 194, Langworthy Road, Pendleton, Salford 6.
Broughton District (Salford Township).	The whole of the former Township of Broughton.	Dr. R. B. Fletcher, Whin Knowle, 498, Bury New Road, Salford 7.

Mr. A. Sharrocks is Vaccination Officer for the whole of Salford.

Particulars as to vaccination carried out in Salford during the year 1938 are as follows :—

PARTICULARS AS TO VACCINATION DURING 1938.

District.	No. of cases in birth lists.	No. of vaccination certificates received, irrespective of district of birth.	No. of certificates of postponement owing to			No. of statutory declarations under Section 1 of the Vaccination Act, 1907.	No. of certificates of insusceptibility or of having had smallpox.	No. of cases.		No. of entries in list sent to public vaccinator.
			Health of child.	Condition of house.	Prevalence of infectious disease.			Parents removed out of district.	Otherwise not found.	
NORTH.....	812	701	114	....	....	142	2	42	18	203
SOUTH.....	801	634	75	....	....	174	2	8	7	195
WEST.....	1,547	1036	103	....	....	321	2	56	30	258
TOTAL.....	3,160	2,371	292	....	....	637	6	106	55	656



SECTION III.

Infectious Diseases.

The number of cases of infectious disease notified during 1938 was 4,606, as compared with 3,454 during 1937. This increase of 1,152 cases was due entirely to the continuance during the early months of 1938 of the epidemic of measles which broke out during the late months of 1937. Altogether the epidemic involved 3,915 cases, 1,315 of which occurred during 1937 and 2,600 during 1938.

The innovations referred to in my report for 1937, viz. :—

- (a) The offering of advice in their own homes to mothers of children suffering from measles by Health Visitors ; and
- (b) The issue to medical practitioners, free of charge, of Immune Globulin ; were continued during 1938.

The notifications of other infectious diseases numbered only 2,006, an extremely low figure and 133 lower than the corresponding figure for 1937 to which I called special reference in my report for that year.

While there was little change in the numbers notified of the majority of diseases, there was a gratifying fall in the incidence of Acute Primary Pneumonia and Influenzal Pneumonia, as shown below :—

	1937.	1938.
Acute Primary Pneumonia .....	447	411
Influenzal Pneumonia.....	66	14

The figures recorded in respect of these diseases for 1938 are exceptionally low so far as Salford is concerned and reflect an unusual absence of fog from the Salford atmosphere. As I have reported on many previous occasions the prevalence of respiratory trouble is accentuated by foggy weather.

Details of the number of cases of infectious disease notified are given in Tables 1 and 2, pages 63 and 64. An additional Table (Table 3), showing the number of cases of infectious disease notified, removed to hospital, and the number of deaths from such diseases, appears on page 66.

The usual methods described in previous reports for the prevention of the spread of infectious diseases were continued. School teachers, in addition, are encouraged to report cases of non-notifiable disease which are at once investigated by the school medical officers.

In addition, Immune Globulin, Diphtheria Anti-Toxin and Scarlet Fever Anti-Toxin are issued, free of charge, to Medical Practitioners. These arrangements are used to a considerable extent by Salford Medical Practitioners.

Cases of infectious disease which cannot be isolated at home are removed to the Corporation's Infectious Diseases Hospital, the Ladywell Sanatorium and Isolation Hospital (for detailed report upon this Institution, see pages 88 to 111). Bedding and clothing which have been exposed to infection are disinfected at the Corporation's Disinfecting Station at Mode Wheel ; details of the work carried out at this Station appear on pages 35 to 36.

NOTIFIABLE DISEASES.	Cases notified in Whole District.						Total Cases notified in each Ward.																	
	At All Ages	At Ages—Years.						Albert Park.	Charlestown.	Claremont.	Crescent.	Docks.	Kersal.	Langworthy.	Mandley Park.	Ordsall Park.	Regent.	St. Matthias.	St. Paul's.	St. Thomas.	Seedley.	Trinity.	Waste.	Cases removed to Hospital.
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 45.	45 to 65.																	
Smallpox.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria (including Membranous croup)	541	8	146	282	58	40	7	...	31	45	22	43	24	25	42	36	34	25	39	36	22	23	72	531
Erysipelas.....	113	1	1	5	10	32	46	18	6	8	6	10	9	7	5	9	5	6	11	2	3	12	2	70
Scarlet Fever.....	425	3	136	240	30	16	...	...	34	18	15	35	31	13	54	29	25	47	10	17	23	24	22	389
Typhus Fever.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric Fever.....	1	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
Relapsing fever.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Pyrexia.....	42	...	...	...	10	32	...	...	4	4	4	4	...	...	3	3	3	4	...	1	2	3	3	12
Cholera.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cerebro-Spinal Meningitis.....	15	3	1	1	3	3	4	...	2	1	...	...	...	1	...	1	1	1	...	...	1	5	2	3
Acute-Poliomyelitis.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...
Anthrax.....	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Glanders.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ophthalmia Neonatorum.....	14	14	...	...	...	...	...	...	1	1	1	1	1	...	...	2	...	1	1	3	...	...	...	1
Pulmonary tuberc'lsis	331	1	...	13	73	144	89	11	36	29	16	18	9	24	29	29	19	34	11	13	12	19	16	542
Other forms of tuberculosis.....	86	4	12	29	10	21	8	2	9	7	4	5	3	5	7	10	5	8	3	2	4	5	4	59
Malaria.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dysentery.....	1	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Acute Primary Pneumonia.....	411	33	92	87	41	81	59	18	30	24	12	25	6	28	17	26	35	35	26	28	12	42	17	22
Influenzal Pneumonia	14	...	1	1	2	4	3	3	4	2	...	1	...	...	...	2	...	2	...	...	...	1	1	...
Encephalitis Leth.....	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Acute Polio Encephalitis.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
phalitis.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pemphigus Neonatorum.....	10	10	...	...	...	...	...	...	1	2	1	1	...	1	...	...	3	...	...	...	...	1	...	2
Measles.....	2600	201	1625	757	11	5	1	...	287	173	196	136	145	165	175	138	66	206	125	215	123	147	171	141
Total.....	4606	278	2015	1415	249	378	219	52	445	314	278	276	288	249	279	295	196	370	226	317	202	282	310	1774



**TABLE I. 2.**  
SHOWING THE NUMBER OF CASES OF INFECTIOUS DISEASE NOTIFIED TO THE HEALTH  
DEPARTMENT DURING THE YEARS 1883 TO 1938.

[illegible]



Year.	†Chicken-pox	Small-pox.	Scarlet Fever	Diphtheria.	Enteric.			Typhus.	Con- tinued.	Puerperal.	Puerperal Pyre-	Pemphigus.	Erysipelas.	Anthrax.	Cerebro-Spina Meningitis.	Acute Poliomylitis	Ophthalmia Neonatorum	*Measles.	culosis.		Trench Fever	Malaria.	Acute Polio Encephalitis	Dysentery.	Acute Primar. Pneumonia.	Influenzal- Pneumonia.	Encephalitis Lethargica.	Total.
					Enteric.														Pul- monary.	Non-Pul- monary.								
1908.....	...	...	1341	629	181	...	...	...	7	27	...	...	127	...	...	...	...	...	563	...	...	...	...	...	...	...	...	2875
1909.....	...	...	1577	562	138	...	...	...	2	26	...	...	182	...	...	...	...	...	581	...	...	...	...	...	...	...	...	3068
1910.....	...	...	909	333	113	...	...	...	...	24	...	...	129	...	...	...	...	...	651	...	...	...	...	...	...	...	...	2159
1911.....	...	...	911	375	108	...	...	...	1	24	...	...	217	...	...	...	...	...	714	...	...	...	...	...	...	...	...	2350
1912.....	...	...	541	242	76	...	...	...	7	26	...	...	181	...	1	29	...	...	1073	...	...	...	...	...	...	...	...	2206
Average 5 years	...	...	1056	428	123	...	...	...	3	25	...	...	167	...	...	...	...	...	716	...	...	...	...	...	...	...	...	2532
1913.....	...	4	1224	336	113	...	...	...	1	17	...	...	203	3	4	2	...	...	1206	503	...	...	...	...	...	...	...	3616
1914.....	...	1	2336	352	63	...	...	...	...	20	...	...	248	1	3	5	80	...	1126	236	...	...	...	...	...	...	...	4471
1915.....	...	1	997	236	84	...	...	...	...	23	...	...	172	...	9	7	97	...	816	195	...	...	...	...	...	...	...	2637
1916.....	...	8	442	204	47	...	...	...	...	13	...	...	124	...	9	1	60	...	745	241	...	...	...	...	...	...	...	3959
1917.....	...	...	200	183	40	...	...	...	...	2	...	...	91	...	2	2	43	...	575	213	...	...	...	...	...	...	...	4401
Average 5 years	...	3	1040	252	69	...	...	...	1	15	...	...	167	1	5	3	70	...	893	278	...	...	...	...	...	...	...	3817
1918.....	...	...	289	148	42	...	...	...	...	17	...	...	92	...	2	2	53	...	556	143	...	...	...	...	...	...	...	2110
1919.....	...	4	663	211	20	...	...	...	...	32	...	...	131	...	6	3	85	...	583	107	...	117	...	...	...	...	4	5078
1920.....	...	1	1124	334	49	...	...	...	1	40	...	...	135	...	10	1	116	...	574	120	2	42	...	...	...	...	6	2791
1921.....	...	...	1746	313	41	...	...	...	2	19	...	...	146	...	9	...	81	...	553	102	...	11	...	...	...	...	7	3425
1922.....	...	...	1275	359	37	...	...	...	...	25	...	...	141	...	4	...	72	...	510	101	...	6	...	...	...	...	1	2957
Average 5 years	...	1	1019	273	37	...	...	...	1	26	...	...	129	...	6	1	81	...	555	115	1	35	...	...	...	...	4	3272
1923.....	...	...	868	304	27	...	...	...	...	22	...	...	98	1	5	1	57	...	547	125	...	4	...	...	...	...	8	2268
1924.....	...	...	403	286	26	...	...	...	...	18	...	...	89	...	4	1	56	...	557	87	...	1	...	...	...	...	59	2189
1925.....	1145	...	510	376	30	...	...	...	...	17	...	...	134	...	2	1	60	...	507	132	...	1	...	...	...	...	27	3484
1926.....	...	...	720	533	10	...	...	...	...	20	...	...	140	...	3	4	50	...	532	123	...	1	...	...	...	...	13	2651
1927.....	...	1	631	507	9	...	...	...	...	7	...	...	120	...	5	4	48	...	573	148	...	2	...	...	...	...	17	2740
Average 5 years exclud'g chicken pox	...	1	626	401	20	...	...	...	...	17	20	20	116	1	4	2	54	...	543	123	...	2	...	...	...	...	25	2437
1928.....	...	5	822	425	20	...	...	...	1	19	28	11	139	...	13	...	55	...	454	166	...	1	...	...	...	...	12	2709
1929.....	...	...	635	678	9	...	...	...	...	16	18	10	150	...	5	2	35	...	522	112	...	...	...	...	...	...	9	3027
1930.....	...	7	679	736	25	...	...	...	1	13	30	6	158	...	2	...	33	...	454	130	...	...	...	...	...	...	8	2753
1931.....	...	...	478	582	7	...	...	...	...	18	25	27	113	...	4	...	13	...	446	139	...	...	...	...	...	...	3	2461
1932.....	...	...	423	727	16	...	...	...	...	23	23	21	99	...	7	4	16	...	472	124	...	...	...	...	...	...	3	2470
Average 5 years	...	2	607	630	15	...	...	...	1	18	25	15	132	...	6	1	30	...	470	134	...	1	...	...	...	...	7	2684
1933.....	...	...	582	759	7	...	...	...	...	21	38	6	125	...	13	1	18	...	464	122	...	...	...	...	...	...	2	2706
1934.....	...	...	547	888	3	...	...	...	...	17	32	5	122	...	14	...	14	...	425	135	...	1	...	...	...	...	3	2715
1935.....	...	...	587	690	8	...	...	...	...	19	27	9	114	...	11	...	28	...	366	93	...	...	...	...	...	...	1	2430
1936.....	...	...	543	589	3	...	...	...	...	11	18	14	86	...	22	5	17	...	314	103	...	...	...	...	...	...	...	2488
1937.....	...	...	470	531	8	...	...	...	†	†5	54	5	103	1	16	...	9	...	324	93	...	...	...	...	...	...	...	3454
Average 5 years	...	...	546	691	6	...	...	...	...	15	34	8	110	1	15	1	17	...	379	109	...	1	...	...	...	...	1	2759
1938.....	...	...	425	541	1	...	...	...	...	...	42	10	113	1	15	...	14	...	331	86	...	...	...	...	...	...	1	4606

\* Measles notifiable in Salford 1916 to 1919, and from May 15th, 1936.

† Chicken-pox notifiable in Salford, January 22nd to December 31st, 1925.

‡ Not notifiable after October 1st, 1937.

TABLE I. 3.

NUMBER OF CASES OF INFECTIOUS DISEASE NOTIFIED, NUMBER REMOVED TO HOSPITAL, AND THE NUMBER OF DEATHS FROM SUCH DISEASES DURING THE YEAR 1938.

DISEASE.	CASES NOTIFIED.										AGE GROUPS.					Number Removed to Hospital.	Total Deaths.
	Under										Over						
	1	1-2	2-3	3-4	4-5	5-10	10-15	15-20	20-35	35-45	45-65	65	Total.				
Diphtheria .....	8	23	32	49	42	213	69	38	46	14	7	—	541	531	11		
Scarlet Fever .....	3	11	37	47	41	172	68	19	23	4	—	—	425	389	2		
Measles .....	201	302	421	457	445	712	45	7	8	1	1	—	2,600	141	24		
Erysipelas .....	1	—	—	1	—	2	3	4	21	17	46	18	113	70	2		
Pneumonia—Primary .....	33	34	21	22	15	69	18	22	54	46	59	18	411	22	185		
Pneumonia—Influenzal .....	—	—	—	—	1	1	—	—	5	1	3	3	14	—			
Puerperal Pyrexia .....	—	—	—	—	—	—	—	—	35	7	—	—	42	12			
Encephalitis Lethargica...	—	—	—	—	—	—	—	—	—	—	1	—	1	—	4		
Cerebro-Spinal Meningitis	3	—	1	—	—	—	1	2	2	2	4	—	15	3	5		
Enteric Fever .....	—	—	—	—	—	—	—	—	—	—	1	—	1	1	—		
Dysentery .....	—	—	—	—	1	—	—	—	—	—	—	—	1	—	—		
Ophthalmia Neonatorum ..	14	—	—	—	—	—	—	—	—	—	—	—	14	1	—		
Pemphigus Neonatorum ..	10	—	—	—	—	—	—	—	—	—	—	—	10	2	1		
Anthrax .....	—	—	—	—	—	—	—	1	—	—	—	—	1	1	—		
Tuberculosis—Pulmon- ary.....	1	—	—	—	—	5	8	61	111	45	89	11	331	*542	186		
Tuberculosis—Non- Pulmonary .....	4	3	2	4	3	15	14	14	14	3	8	2	86	59	28		
TOTAL .....	278	373	514	580	548	1189	226	168	319	140	219	52	4,606	1,774	449		

\*Including 20 Observation Cases.



**TUBERCULOSIS DISPENSARY.****Annual Report for 1938.**

The Tuberculosis Dispensary is situated at Nos. 145 and 147, Regent Road, Salford, and consists of two consulting rooms with waiting and dressing rooms attached, X-ray and dark rooms and a room set apart and specially fitted up for the performance of Artificial Pneumothorax Refills, Gas Replacements, etc., which is necessary owing to the increasing number of patients undergoing collapse therapy. There are no branch dispensaries or visiting stations. The Staff consists of two Medical Officers, five Health Visitors and three Clerks.

In addition to the Dispensary work the Tuberculosis Officers are responsible for the treatment of tuberculous patients at Ladywell Sanatorium (72 beds) and the Senior Tuberculosis Officer visits the Municipal (Hope) Hospital every week for the purpose of consulting with the Medical Staff as to the diagnosis of suspected cases of tuberculosis and to recommend the most suitable treatment.

Since the advent of Hope Hospital to the control of the Health Committee of the City Council in April, 1935, it has at last become possible to bring about the centralised control of all cases of tuberculosis.

During 1936 it was decided to close the wards at Hope Hospital to cases of pulmonary tuberculosis and transfer them to Ladywell Sanatorium. All known cases of this type requiring Hospital treatment are now admitted to Ladywell Sanatorium only and any case of pulmonary tuberculosis found in Hope Hospital is transferred as soon as possible.

**(a) Patients Referred for Examination.**

Seven hundred and ninety-six (796) patients (including non-pulmonary cases) were referred to the Tuberculosis Officers for examination by General Practitioners, School Medical Officers, and local Hospitals during 1938. Although the Tuberculosis Officers now see more early cases of disease than formerly, there are still far too many patients seen for the first time where the disease is so advanced that no treatment can be of lasting value. It is only by the co-operation of the General Practitioners that the Tuberculosis Officers can deal with cases in their earliest and, therefore, most curable stage.

The relations between the General Practitioners of the City and the Dispensary Medical Staff are most cordial and every encouragement is given to send all suspected cases to the Dispensary for examination. A full report of the condition found after physical and X-ray examination is sent to the Doctor concerned, and it has been possible to give invaluable assistance in diagnosing not only lesions of the chest and other organs caused by tuberculosis, but many other non-tuberculous lesions of the chest. This is of great value to Practitioners in the treatment of such cases.



A large majority of the patients referred for examination are seen before notification.

Since the regular use of X-ray examinations it has often been found that a definite tuberculous lesion can be present in a patient's chest without causing any symptoms noticeable to the person affected. When such lesions are found it is sometimes extremely difficult or impossible to make the patient understand the necessity for entering a Sanatorium, or at least giving up work for a time until there is X-ray evidence of definite retrogression of the lesion. It is even more remarkable that pulmonary tuberculosis can reach widespread distribution in the lungs without producing a sufficient degree of illness to cause the person to seek the advice of a Doctor. Consequently the disease has often reached an advanced stage before they are seen by a General Practitioner or Hospital. At the same time there is no doubt that the thought of loss of employment prevents many patients from seeking early advice.

Improvement in this respect can only be brought about by propaganda work and all opportunities are taken by Tuberculosis Officers to give lectures and talks to various local associations and by window displays at the Health Office to bring before the public a knowledge of the early signs of tuberculosis.

At the same time it cannot be too strongly emphasised that inadequate medical examination when the patient consults his Doctor is bound to result in failure to recognise tuberculosis at an early or curable stage. It is gratifying to note, however, that there is a decrease on last year's figures in the percentage of cases of pulmonary tuberculosis not notified before death during 1938.

A point of first importance, and one that is frequently neglected, is the sending of samples of patient's sputum for examination for the presence of tubercle bacilli in all cases of persistent cough which do not yield early to ordinary treatment.

One thousand and eighty-one (1081) samples of sputum were examined in 1938.

All sputum examinations desired by Medical Practitioners are made free of charge at the Municipal Pathological Laboratory and special sterile metal containers are provided for the collection of specimens.

#### **(b) Routine Procedure.**

When a patient is notified to this Department by a Medical Practitioner as suffering from tuberculosis in any form whatever, the home of such patient is immediately visited by one of the Health Visitors. Precautions as to the likelihood of the spread of infection, the desirability of separate sleeping accommodation, etc., are advised, and instructions given regarding periodical disinfection of walls, bedding and utensils.

The examination of contacts, especially in the case of adolescents, is of the first importance and every endeavour is made by the Health Visitors to induce all contacts to attend at the Dispensary for examination. Unfortunately, most of these above school age are working and can only be examined at an evening clinic as they refuse to take time off work and so lose money for an examination which they consider to be of little importance. We consider that X-ray examination of contacts should also be carried out and this is done at the Dispensary in all cases.

The routine examination of all child contacts is of much less importance than in the case of adolescents but this is carried out as far as possible. Three hundred and ninety (390) contacts were examined last year. Ten of these were found to be suffering from pulmonary tuberculosis.

It happens not infrequently that a diagnosis cannot be made on first examination of a patient at the Dispensary, and in all such cases the patients are re-invited to attend the Dispensary periodically until a definite diagnosis is made.

In some cases of advanced disease where removal to an Institution for treatment is impracticable, and adequate nursing is impossible under the patient's home conditions, arrangements are made with the District Nursing Association, and the patients are visited daily (in some cases twice daily) in their homes by a trained nurse. In the case of patients in poor circumstances and recommended by the Tuberculosis Officers as being suitable for the granting of extra nourishment, arrangements are made with milk dealers in the City for milk and eggs to be supplied each day.

The usual types of cases receiving extra nourishment are : (a) patients who have received an adequate course of sanatorium treatment and whose medical condition is such that, with the grant of extra nourishment, they may be expected to maintain or recover full working capacity ; and (b) patients in whose cases ultimate arrest of the disease may reasonably be anticipated, and who are waiting for admission to a sanatorium.

It is found that when patients are discharged from the Sanatorium where they have been receiving adequate nourishment to homes where the food supply is below normal, they soon begin to lose weight, their resistance is lowered, and the disease is very liable to become active again.

### (c) X-ray Examination.

The efficiency of a Tuberculosis Dispensary is greatly enhanced by its equipment with a modern X-ray installation. A powerful set (100 M.A. single valve unit) is installed at the Dispensary, with all necessary accessories, and X-ray examinations are made in large numbers.

This is, however, to be replaced by a more powerful plant during the early part of 1939, which will allow the latest type of X-ray tubes to be used. The present plant, which has been in use for about ten years, is to be transferred to Ladywell Sanatorium. The new apparatus is to be installed in two sections, one portion being specially designed to produce the finest skiagrams of the chest that modern development in X-ray engineering has made possible. The second portion is mainly for the X-ray examination of other parts of the human anatomy but has also an attachment for tomographic examination of the chest.

Every new case sent for investigation is carefully screened after physical examination, and in all cases a skiagram of the chest or other part is taken.

This method of examination is an invaluable aid, not only for purposes of diagnosis, but in obtaining information as to the real extent of the disease in the lungs, bones or joints of the patient. It is also of great value in determining the results of treatment. Two thousand nine hundred and ninety-one (2991) X-ray examinations were made last year. X-ray examinations have been found of great value to General Practitioners in the differentiation of other chronic diseases of the lung simulating tuberculosis, many of which in the past have been diagnosed as cases of pulmonary tuberculosis. It should also be noted that considerable time is now saved in making a definite diagnosis of chest diseases, and doubtful cases are not required to be kept under observation for periods of longer than one or two months before a final decision can be made.

Much public money and loss of the patients' time is saved also by obviating the sending of suspected cases to the Sanatorium for periods of observation where the physical signs in the lungs simulate those of pulmonary tuberculosis. By means of the X-rays the differential diagnosis of such cases is made enormously easier.

In the X-ray Department a reducing camera was installed some years ago, and when a radiogram showing tuberculous disease is taken, a reduced sized photographic copy is sent to the General Practitioner. In order that he may have an accurate knowledge of the condition and extent of the disease, careful notes describing the lesions are filled in on the back of the photograph.

Letters of appreciation have been received from Medical Practitioners regarding this development, which is undoubtedly of great assistance to the doctor attending the patient.

It has been noticed of late that some patients of much higher social position than is usual are being sent to the Dispensary by local practitioners. The explanation is that owing to X-ray and physical examinations being carried out at the one consultation it is possible for a report to be in the hands of the patient's doctor in a few hours.

Thus a patient's natural anxiety is early relieved, especially in a negative case, and in the case of a positive diagnosis arrangements can be made for treatment with the minimum delay.



**(d) Treatment by Artificial Pneumothorax.**

The greatest advance of recent years in the treatment of pulmonary tuberculosis is the more universal use of Artificial Pneumothorax or collapse of the lung.

This method of treatment is now well established and is in regular use.

Primary inductions are carried out both at Ladywell and Nab Top Sanatoria. Refills are continued there for six months or longer according to the time the patient is able to remain in the Sanatorium.

Usually after six months, in straightforward cases, the patient can return home, and the refills are continued at the Dispensary. At the end of 9-12 months patients return to work and have refills at intervals of two to four weeks, according to absorption of air.

As the collapse of the lung must be kept up for a period of from two to four years the number of patients requiring refills is constantly growing, and a special room is set apart for the Dispensary treatment of those patients undergoing collapse therapy. The room is fitted with all necessary apparatus for refills, gas replacements, etc.

Owing to the fact that the number of patients having artificial pneumothorax refills and who are working, tends to increase, it has been found necessary to set aside one evening clinic each fortnight for these patients. It is not now necessary for such patients to ask for leave from work which has always been a source of difficulty. Twelve patients are at present attending this evening artificial pneumothorax refill clinic.

The ideal case for treatment by collapse therapy is one in which the disease is confined entirely to one lung so far as can be ascertained from an X-ray film of the chest.

Provided that the whole lung collapses completely without adhesions, arrest of the disease is obtained after three to four years' treatment in the great majority of cases.

But in those cases in which collapse is imperfect and adhesions are present, pleural effusions are very liable to form when the prognosis of the case is completely altered and a cure is much less likely to be obtained.

Our experience has also taught us that in those patients who have some disease in the contra-lateral lung there is a considerable likelihood of this disease extending and becoming active at a later date. This is especially so in patients who for economic reasons are obliged to return to work too soon and as a consequence too much work is thrown on the non-collapsed lung.

So many of these patients have died through active spread in the contra-lateral lung that we now choose our cases for collapse treatment more conservatively than at first.

At the present time we do not recommend collapse therapy unless the lesion on the less diseased side is quite small and confined to one zone of the lung.

In a few patients, arrest of the lesion on one side has had to be followed by collapse of the other lung owing to extension of the disease and this has been accomplished successfully.

There is no doubt that collapse therapy has completely altered the prognosis of pulmonary tuberculosis in suitable cases.

#### **Analysis of Cases Given Artificial Pneumothorax Treatment.**

During the past year thirty-nine (39) new cases commenced treatment by Artificial Pneumothorax (twelve (12) at Ladywell Sanatorium) and twenty-seven (27) at Nab Top Sanatorium. Seventy-three (73) patients continued their refills at the Dispensary, twenty-one (21) of whom are working with completely quiescent disease. The number of Artificial Pneumothorax refills carried out at the Dispensary, Ladywell, and Nab Top Santoria during the past year was as follows :—

Tuberculosis Dispensary.....	640
Ladywell Sanatorium.....	189
Nab Top Sanatorium.....	514
	—
Total Number of Refills.....	1,343
	—

#### **Other Forms of Treatment for Pulmonary Tuberculosis.**

##### **1. TREATMENT BY GOLD SALTS (GOLD THIOSULPHATE).**

These preparations are employed dissolved in distilled water for the small doses and Gluconyl (Calcium Gluconate) for the larger doses.

The treatment is commenced with .05 gram, and gradually increased to .5 gram. until 4.5 grams. have been given. This constitutes one course and is repeated if necessary. The use of Gluconyl as a vehicle for gold salts has been found to greatly reduce the risk of certain complications arising such as skin rashes, diarrhoea, albuminuria, conjunctivitis and stomatitis.

#### **TYPE OF CASE SUITABLE FOR TREATMENT BY GOLD SALTS.**

- (a) Patients undergoing collapse treatment of one lung in whom exacerbation of an early lesion in the other lung takes place. Good results have been obtained in some cases and X-ray examination has shown that

the spread of disease has been checked with subsequent fibrosis. In some cases considerable resolution of the disease has taken place; the X-rays showing marked clearing of the lung.

In a few patients little benefit has been obtained owing to complications arising. Three patients in this category have received gold injections at Ladywell Sanatorium and fourteen at Nab Top Sanatorium.

- (b) Patients with the upper portions of both lungs about equally affected are not suitable for collapse therapy and when ordinary sanatorium treatment has little effect the injection of Gold Salts does in some cases afford considerable benefit. The sputum becomes negative and fibrosis of the lesion commences. In fifty per cent. of our cases little or no benefit was obtained.

Thirteen patients of this type have received gold injections at Ladywell Sanatorium and twenty-one at Nab Top Sanatorium.

#### (e) Insured Persons.

Insured patients not in need of Institutional treatment are usually placed on domiciliary treatment, that is to say, they are treated by their own doctors whilst residing at home, and records of progress should be furnished every three months by the attending Medical Practitioners on Form G.P. 36. These patients are examined from time to time by one of the Tuberculosis Officers, and a report furnished to the Practitioner concerned.

#### (f) Dispensary Treatment.

Non-insured patients suffering from chronic disease who are unsuitable for Sanatorium treatment or who have received Institutional treatment and are now ambulant, and who are too poor to pay a General Practitioner, are treated at the Dispensary by Cod Liver Oil Emulsions or suitable drugs.

The condition of these persons depends to a large extent on the home conditions, the facilities for obtaining suitable food and the general habits of the patient. Their disease appears to remain stationary for long periods, especially when they are of middle age or over and when the acute stage of the disease is past.

#### (g) Primary Tuberculous Pleurisy.

Owing probably to the increasing resistance of the race to tuberculosis a larger number of patients infected with the Tubercle Bacillus first show this by developing a primary tuberculous pleurisy without any physical or X-ray evidence of a lesion in the lungs.



Consequently many more cases of primary tuberculous pleurisy have been referred by General Practitioners during the past year to the Tuberculosis Officers, who have also been asked to see a considerable number at the Hope Hospital.

It is now recognised by experienced tuberculosis workers that the majority of primary pleurises and certainly those with effusion (except a few which may be due to Syphilis or New Growth) should be regarded as due to the Tubercle Bacillus and the patient given adequate treatment before returning to work.

Samples of the effusion from the cases of primary pleurisy passing through our hands have been submitted to the laboratory for guinea pig inoculation and the great majority have been returned positive.

In former years many patients who had suffered from primary pleurisy at some previous date returned to work after a few weeks' treatment at home, and all of them developed active disease in one or both lungs after a varying interval of time. It was evident that the disease had been latent over this period, and owing to the patients' resistance becoming lowered in some way the Tubercle Bacillus had again become active.

All these patients are now urged to undergo Sanatorium treatment until all signs of the disease have disappeared. The majority accept this advice, but some refuse as they feel so well after a few weeks' rest at home or in Hospital.

We are of opinion that all patients with primary tuberculous pleurisy should undergo Sanatorium treatment until all X-ray evidence of the disease has disappeared. This will, as far as is possible, prevent the development of active pulmonary tuberculosis at a later date.

#### **(h) Non-pulmonary Tuberculosis.**

The total number of primary and informal notifications of non-pulmonary or surgical tuberculosis received during 1938 was eighty-six (86), forty-one (41) adults and forty-five (45) children of school age. These are made up of cases suffering from disease of glands, bones, joints, abdomen, meninges and other forms. The majority of these patients are not seen at the Dispensary as they are usually sent direct by the General Medical Practitioners to the local Hospitals for diagnosis and treatment. A certain number are sent in the first instance to the Dispensary by General Practitioners when the diagnosis is doubtful and in the case of children some are referred by the School Medical Officers.

Cases requiring surgical treatment are sent by the Dispensary Medical Officers to the Municipal Hospital in most instances, but some are first seen at Salford Royal Hospital. Where Sanatorium treatment is likely to be of benefit the patients are sent by the Tuberculosis Officers and at the request of Hospital Medical Officers to Nab Top Sanatorium. When considered suitable, patients are referred for treatment at the Artificial Sunlight Clinic.

### ARTIFICIAL SUNLIGHT.

Five sessions per week are allotted to the Tuberculosis Department for the treatment of non-pulmonary tuberculosis in the Artificial Sunlight Clinic. The equipment consists of:—

Two Carbon Arc Lamps of the Westminster type.

One Jesionek Mercury Vapour Lamp.

Cases suitable for this form of treatment are:—

- (a) Tuberculosis of the skin.
- (b) Tuberculous glands, especially those with discharging sinuses.
- (c) Abdominal Tuberculosis.
- (d) Tuberculosis of bones and joints.

All these forms of non-pulmonary disease derive great benefit, except those showing marked changes in the bones or joints of old standing.

A large number of children of school age have been given courses of Artificial Sunlight at the request of the School Medical Officers. These have been cases of General Debility or recurring Bronchial Catarrh and especially when these came from tuberculous households. Combined with treatment at an Open-air School much benefit has been shown by these children.

### EXAMINATION AND TREATMENT OF CHILDREN DURING 1938.

#### (a) Contacts.

During the year 1938, one hundred and fifty-seven (157) children were examined as contacts at the Tuberculosis Dispensary.

Two were found to have pulmonary tuberculosis.

#### (b) Pulmonary Disease in Children.

##### 1. TUBERCULOUS.

Ninety-seven (97) children of school age were referred to the Dispensary in 1938 for examination by the School Medical Officers, General Practitioners and Medical Officers of local Hospitals and Dispensaries.

Eleven (11) children were diagnosed as suffering from tuberculous disease of the chest. Of the above eleven cases, three (3) came from a home in which a positive adult case of pulmonary tuberculosis had occurred during the past two years.

The adult type of pulmonary tuberculosis is rare in children of school age and only two patients were found to be suffering from this type. Each had definite physical and X-ray evidence of the disease with a positive sputum. Four patients were cases of tuberculous pleurisy with effusion, three positive on guinea pig inoculation and one negative. Five patients showed hilar gland infection on X-ray examination.

Four of the above children were admitted for treatment to Nab Top Sanatorium and six to the Ladywell Sanatorium. At the Nab Top Sanatorium there is an Open-air School in which all children under treatment can continue their education as soon as they are considered fit to attend by the Medical Superintendent.

## 2. NON-TUBERCULOUS.

Chronic non-tuberculous pulmonary disease in children is very common and is usually a sequela of an attack of pneumonia or repeated bronchitis following measles or whooping cough. It should be recognised that measles in particular is liable to cause marked alteration in the epithelium of the bronchial mucosa and the stroma of the lungs which is followed by fibrotic changes. Broncho or lobar pneumonia in children frequently fails to resolve completely and goes on to produce pulmonary fibrosis.

These children are extremely susceptible to the polluted atmosphere of industrial towns and easily take cold, resulting in recurrent attacks of bronchitis. The pulmonary fibrosis is increased and finally bronchiectasis may supervene. A considerable number of these children are referred to the Tuberculosis Medical Officers for physical and X-ray examination of the chest because the physical signs resemble those of tuberculous lung disease. Many of these children find considerable benefit by attending an Open-air School and we have also found that treatment at the Artificial Sunlight Clinic is useful in increasing their resistance.

## INSTITUTIONAL TREATMENT.

### (a) Nab Top and Ladywell Sanatoria.

The residential institutions in connection with the tuberculosis scheme are :—

(a) Nab Top Sanatorium, Marple.

(b) Ladywell Sanatorium, Salford.

There are 120 beds available at the Nab Top Sanatorium, Marple, for the treatment of Salford patients. These beds are occupied principally by observation, early, and intermediate cases of pulmonary tuberculosis. Occasionally, however, cases of surgical tuberculosis are admitted for treatment. Twelve of the beds which are in rather exposed shelters are not used during the six winter months.



At the Ladywell Sanatorium there are 72 beds set apart for the treatment of tuberculosis. Many cases are being admitted to the Ladywell Sanatorium while the temperature remains above normal; subsequently, on becoming afebrile, they are transferred to the Nab Top Sanatorium, Marple, for open-air sanatorium treatment. It has been found that many cases of quite moderate severity do badly at an open-air sanatorium such as Nab Top, where they are almost completely in the open air, but when admitted to the Ladywell Sanatorium, in which, while there is an abundance of fresh air, the patient is not actually living and sleeping in the open air, excellent progress is made, and the patient's temperature rapidly falls. Numbers of these patients have been transferred from the Nab Top Sanatorium, where they had been in bed continually for several months with no apparent improvement, and on transfer to the Ladywell Sanatorium immediate improvement with a fall of temperature has been noticed. It is, consequently, of great value to have two Institutions of different type for the treatment of pulmonary tuberculosis.

The Ladywell Sanatorium is also largely used for the isolation of advanced cases; such isolation is undoubtedly of great value in lessening the danger of massive infection in the homes, but is detracted from by the difficulty of keeping the patients in hospital indefinitely.

In the last report it was mentioned that X-ray equipment was to be installed at Ladywell Sanatorium by transferring the single valve plant from the Dispensary. It is expected that this procedure will be carried out early in 1939 as soon as new apparatus for the Dispensary can be installed. This will then obviate the bringing of patients, by ambulance, to the Dispensary for X-ray examination.

Owing to the increasing number of cases requiring treatment by Artificial Pneumothorax a certain number of beds in Ladywell Sanatorium have had to be utilised during the past few years for this type of case. The Medical Superintendent at Nab Top Sanatorium, Marple (where there is no Assistant Medical Officer), has not been able to cope with the whole number of patients requiring collapse therapy. Consequently, twelve (12) patients have undergone this form of treatment at Ladywell Sanatorium and have progressed equally as well as those at Nab Top Sanatorium.

#### **(b) Treatment of Tuberculous Skin Diseases.**

Special arrangements have been made with the Manchester and Salford Hospital for Skin Diseases for the treatment of lupus and other tuberculous skin lesions. A large number of these cases were approved for Artificial Sunlight treatment and there is no doubt that this method has a very beneficial effect on the lesions, recovery being much more rapid than in cases treated by local applications only. It is, however, necessary in order to obtain the maximum benefit that the patients should attend daily for Artificial Sunlight treatment.

The number of visits paid by patients to the Skin Hospital for treatment during 1938 was two hundred and five (205), and the total number of tuberculous skin cases treated was twenty-seven (27).

It was decided to treat all suitable cases at our own Artificial Sunlight Clinic and accordingly the existing accommodation was increased and an additional carbon arc lamp installed in April, 1934. In this way patients, who had previously been treated at the Manchester and Salford Hospital for Skin Diseases, now attend our own Sunlight Clinic where the treatment is carried out at a much cheaper rate than hitherto. During 1938, one hundred and twenty-six (126) patients have received treatment at the Clinic with a total number of attendances of three thousand four hundred (3400).

#### **GENERAL REMARKS.**

The powers contained in the Salford Corporation Act, 1920, and the Public Health Act, 1936, for the compulsory removal to hospital of persons suffering from pulmonary tuberculosis have not been utilised up to the present time.

It has been found that in obstinate cases of advanced disease it is sufficient to warn the patient that compulsory powers can be put in force on application to a magistrate.

No action has been necessary under the Public Health (Prevention of Tuberculosis) Regulations, 1925, in connection with tuberculous employees in the milk trade.

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TABLE 1.

SUMMARY OF WORK DONE AT THE TUBERCULOSIS  
DISPENSARY IN 1938.

Diagnosis.	Pulmonary.				Non-Pulmonary.				Total.			
	Adults		Children		Adults		Children		Adults		Children	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
A. New cases examined during the year—												
(a) Definitely tuberculous.....	164	94	6	5	10	11	15	11	174	105	21	16
(b) Doubtfully tuberculous.....	—	—	—	—	—	—	—	—	2	3	1	—
(c) Non-tuberculous...	—	—	—	—	—	—	—	—	199	216	34	25
B. Contacts examined during the year—												
(a) Definitely tuberculous.....	3	5	—	2	—	—	—	—	3	5	—	2
(b) Doubtfully tuberculous.....	—	—	—	—	—	—	—	—	—	—	—	—
(c) Non-tuberculous...	—	—	—	—	—	—	—	—	78	147	72	83
C. Cases written off Dispensary Register as—												
(a) Recovered .....	22	20	4	4	2	4	8	6	24	24	12	10
(b) Diagnosis not confirmed or non-tuberculous.....	—	—	—	—	—	—	—	—	283	365	107	108
D. Number of persons on Dispensary Register on December 31st—												
(a) Diagnosis completed.....	445	349	20	16	46	66	63	49	491	415	83	65
(b) Diagnosis not completed.....	—	—	—	—	—	—	—	—	2	3	1	—
1. No. of persons on Dispensary Register on January 1st....	1087		8. No. of visits by Nurses or Health Visitors to homes for Dispensary purposes....		4203							
2. No. of patients transferred from other areas and "lost sight of" cases returned....	35		9. No. of—		609							
3. No. of patients transferred to other areas and cases "lost sight of".....	124		(a) Specimens of sputum, &c., examined.....		2991							
4. Died during the year (Dispensary cases) .....	191		(b) X-ray examinations made in connection with Dispensary work.....		493							
5. No. of attendances at Dispensary (including contacts).....	5392		10. No. of "TB plus" cases on Dispensary Register on December 31st.....		494							
6. No. of consultations with medical practitioners—			11. No. of insured persons under Domiciliary treatment on December 31st.....		1							
(a) Personal .....	5		12. No. of "Recovered cases" restored to Dispensary Register.....									
(b) Other.....	714											
7. No. of visits by Tuberculosis Officers to homes.....	34											



TABLE 2.

SHOWING PERIOD ELAPSING BETWEEN NOTIFICATION AND DEATH  
IN FATAL CASES OF PULMONARY TUBERCULOSIS.

	Number.	Per-centage
Not Notified before death.....	17	9·19
Notified within three months of death.....	52	27·95
„ from three months to one year before death....	39	20·95
„ from one year to two years before death.....	24	12·90
Over two years.....	54	29·01

Total number of deaths, 186.

Ratio of non-notified cases to total fatal cases, 17—186.

TABLE 3.

NEW CASES AND MORTALITY DURING 1938.

Age Periods.	New Cases.				Deaths.			
	Pulmonary.		Non-Pulmonary.		Pulmonary.		Non-Pulmonary.	
	M.	F.	M.	F.	M.	F.	M.	F.
0.....	....	1	3	1	....	1	3	....
1.....	....	....	7	5	....	....	2	1
5.....	3	2	7	8	....	....	1	2
10.....	3	5	8	5	3	....	1	2
15.....	34	27	7	7	10	13	2	4
20.....	16	21	3	5	12	11	....	2
25.....	38	36	3	3	27	14	1	....
35.....	31	14	1	2	18	11	....	2
45.....	33	8	1	4	18	10	....	2
55.....	40	8	2	1	24	5	....	1
65 and upwards.....	9	2	1	1	7	2	1	1
Totals.....	207	124	43	43	119	67	11	17

TABLE 4.

## OCCUPATIONS OF THE 331 CASES OF PULMONARY TUBERCULOSIS NOTIFIED.

## MALES.

1. Joiners, House Decorators and Building Trades .....	18	15. Grocers.....	2
2. Carters and Hawkers .....	4	16. Rubber Workers.....	2
3. Labourers and Navvies.....	26	17. Employees in Motor Trades .....	4
4. Tramway Workers.....	3	18. Bakelite Workers .....	3
5. Clerks and Typists .....	7	19. Gardeners.....	2
6. Makers of Wearing Apparel. 10		20. Warehousemen.....	5
7. Colliers .....	3	21. Glass Workers .....	2
8. Mechanics and Engineering Workers.....	35	22. Scholars.....	5
9. Seamen.....	2	23. Shop Assistants.....	2
10. Railway Workers .....	3	24. Errand Boys.....	2
11. Bar Tenders .....	4	25. Miscellaneous Occupations..	25
12. Dyers and Bleachers.....	2	26. No Occupation.....	26
13. Cotton Workers.....	4	27. Packers.....	4
14. Electricians.....	2		
		Total.....	207

## FEMALES.

1. Clerks and Typists .....	5	9. Shop Assistants .....	4
2. Makers of Wearing Apparel. 20		10. Domestic Servants .....	2
3. Rubber Workers.....	2	11. Packers.....	2
4. Cotton Workers.....	15	12. Miscellaneous Occupations..	14
5. Nurses.....	2	13. No Occupations.....	5
6. Housewives.....	45		
7. Charwomen and Laundresses .....	5	Total.....	124
8. Scholars.....	3		

During the year 1938, 86 new notifications of non-pulmonary tuberculosis have been received.

The new cases of non-pulmonary tuberculosis notified are classified in the following table :—

	Glands.	Bones.	Abdo- men.	Skin.	Men- inges.	Other forms.	Totals.
Under 10 years.....	10	10	3	—	6	2	31
10 to 20 years.....	12	3	6	—	4	3	28
20 to 30 „ .....	4	2	1	1	—	3	11
30 to 40 „ .....	1	1	—	1	—	2	5
Over 40 „ .....	1	2	2	—	—	6	11
Totals.....	28	18	12	2	10	16	86

### NAB TOP SANATORIUM.

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#### Annual Report.

RESIDENT STAFF.—Medical Superintendent, Matron, Home Sister, two Ward Sisters, eleven Nurses, Cook, Laundress, seventeen Maids and Lodge Porter.

NON-RESIDENT STAFF.—Engineer, School-Mistress, Porter and two Gardeners.

ACCOMMODATION.—From April 1st to September 30th each year there is accommodation in the Sanatorium for 120 patients (62 adult males, 42 adult females, 8 male children, and 8 female children).

From October 1st to March 31st, accommodation is slightly less, namely 108 (50 adult males, 42 adult females, 8 male children, and 8 female children).

TYPE OF CASE TREATED.—The Sanatorium is used for the treatment of early and intermediate cases of Phthisis.

A few advanced cases who show good resistance to the disease are also treated. A number of "observation" cases are admitted.

LINES OF TREATMENT.—The treatment adopted is chiefly Hygienic—open air, rest and graduated exercise.

In 1938, forty-four (44) patients were treated by means of Artificial Pneumothorax. Of these, twenty-seven (27) were induced at the Sanatorium and refills were carried out on the remaining cases who had been induced elsewhere or at Marple in 1937. In all, 514 refills were given during the year. The average duration of stay of these patients was 160 days, as compared with an average stay of 130 days for the whole Institution. It is of interest to note that of the 229 patients admitted during 1938, 56 were undergoing treatment for the second time at Nab Top Sanatorium, 5 for the third time, 2 for the fourth time, 1 for a fifth time, 2 for the sixth time, and in one case for a seventh course of treatment. Whilst the great majority of cases of Artificial Pneumothorax showed marked improvement, and in a few cases almost a miraculous degree of improvement, it is to be regretted that this method of treatment cannot be applied to every case, but unless suitable cases are chosen, *i.e.*, with disease confined to one lung, or at most with a slight degree of disease in the other lung, much harm would be done by an indiscriminate use of such treatment. About 10 to 15 per cent. of Artificial Pneumothorax cases develop a pleural effusion, due to



an adherent pleura or to an adhesion and these cases never do so well as the fluid-free cases. The great majority of patients having this treatment and who continue with refills at the Chest Dispensary after leaving the Sanatorium do exceedingly well and are mostly able to carry on with their ordinary occupation during the treatment, which is a great advantage to the patient. Of all the modern methods of treatment Artificial Pneumothorax has, up to the present, given the best results and is likely to remain in favour permanently as a curative method.

The X-ray plant at the Sanatorium is rather out-of-date, and it is gratifying to report that the Health Committee has decided to replace the existing screening stand with one of modern design.

Owing to a deficient supply of current the apparatus was, to a large extent, not in working order during 1938. A Booster was, however, installed at the end of the year and this has apparently overcome all current difficulties. It is hoped during the coming year to make much more use of the plant than was possible during the preceding twelve months. Very few X-ray films were taken owing to this defect but a large number of screenings were carried out, mainly on artificial pneumothorax patients.

Treatment by Nordalin and by Gold Salts is also in use at the Sanatorium. Last year forty-five (45) patients were treated by these methods and whilst a few cases did quite well it cannot be said that these methods of treatment are really successful.

In my report of last year attention was drawn to the decrease in the number of admissions during the year and especially during the winter months when the number of in-patients was at its lowest. It is gratifying to know that the improvement shown in the number of patients in the Sanatorium during 1937 has been maintained during 1938.

The two recreation rooms mentioned in the report last year and which were formally opened on 27th January, 1938, have proved to be a great asset. These rooms are provided with all the social amenities ; card-tables, darts and indoor games are provided and the patients can write or play games with comfort. The men's recreation room is also provided with a billiard table. Each recreation room has been provided with its own wireless installation whereby patients may listen to any programme they so desire. These rooms have already proved an inestimable boon and are greatly appreciated by the patients. The rooms are open from 3-30 to 4-30 and from 6-0 to 8-0 p.m. In inclement weather they are open from 2-0 p.m. instead of 3-30 p.m. and are heated by coal fires which tend to make them much more cheerful and home-like than if heated by pipes. It has been found that the establishment of these recreation rooms has led to a much more cheerful and contented patient and I am decidedly of opinion that they have been the means of keeping patients in the Sanatorium for longer periods during the winter months than would otherwise have been the case.

The three "R's" are not the only things that matter. An open-air school under the guidance of a competent teacher, has been established for patients under 16 years of age. This has been a boon to those children whose state of health has not permitted them to attend the ordinary school at home. No child is allowed to attend school unless certified physically fit by the Medical Superintendent. It may be of interest to know that during the last two years a large number of prizes have been won by the School Children for educational subjects and handicrafts in competition with children from ordinary Day Schools in the Manchester area. Handicraft and gardening take up a good part of the time, the latter especially in the spring and summer, and nature walks and rambles are much appreciated.

A fair proportion of the vegetables used by the Sanatorium is grown in the grounds, and in this work to some extent patients are able to help.

At present the recreations are much as in former years. Bowls and putting for the men and croquet for the women provide most of the recreation in the summer and the lawns are in constant demand for these games. In the winter months whist drives are held frequently.

CANTEEN.—A canteen has been established in the grounds wherein are sold those articles likely to be used in everyday life.

EDUCATION.—The Medical Superintendent at frequent intervals delivers lectures to the patients on such subjects as "Pulmonary Tuberculosis," "Rules of Health" and "The Care of the Mouth and Teeth." It is hoped that on leaving, patients may carry out the instructions given in these lectures and thus minimise the spread of infection in their own homes.

Appended is a table showing the number of admissions, etc., and the number of patient-days during the year 1938 :—

TABLE A—(Nab Top Sanatorium).

SHOWING THE NUMBER OF ADMISSIONS, ETC., AND THE NUMBER OF  
“PATIENT-DAYS” DURING THE YEAR 1938.

	Total Adults.		Children under 15.			Totals.		
	Males	Females	Males	Females	Both	Males	Females	Both
Number of Patients admitted prior to 1938 who remained in Sanatorium for some part of 1938.....	30	22	6	7	13	36	29	65
Number of “Patient-days” in 1938 for patients admitted prior to 1938 who remained in Sanatorium for some part of 1938.....	4299	1785	1075	822	1897	5374	2607	7981
Total admissions, 1938.....	109	91	18	11	29	127	102	229
Total discharges and deaths, 1938.....	109	96	15	15	30	124	111	235
Number of “Patient-days” for persons admitted during 1938.....	12873	10093	2024	981	3005	14897	11074	25971
Total number of “Patient-days” for 1938.....	17172	11878	3099	1803	4902	20271	13681	33952
Average number of Patients in Sanatorium each day during 1938.....	47·0	32·5	8·5	5·0	13·5	55·5	37·5	93·0

NOTE.—The term “Patient-days” represents the product of the number of patients and the number of days spent by those patients in the Sanatorium.





## LADYWELL SANATORIUM.

TABLE SHOWING THE NUMBER OF ADMISSIONS, ETC., AND THE NUMBER  
OF "PATIENT-DAYS" FOR 1938.

## TUBERCULOSIS CASES.

	Males.	Females.	Totals.
Total Number of Admissions during 1938	165	112	277
Number of Persons Admitted prior to 1938 who remained in Hospital for some part of 1938.....	34	20	54
Total Number of Discharges and Deaths during 1938.....	172	114	286
Patients in Hospital on the 31st December, 1938.....	27	18	45
Number of "Patient-days" for Persons Admitted during 1938.....	10104	7972	18076
Number of "Patient-days" (in 1938) for Persons Admitted prior to 1938 who remained in Hospital for some part of 1938.....	2236	1279	3515
Total Number of "Patient-days" for 1938.	12340	9251	21591
Average Number of Patients in Hospital each day during 1938.....	33·81	25·34	59·15

## LADYWELL SANATORIUM AND ISOLATION HOSPITAL.

## Report for the Year 1938.

At the beginning of the year there were 272 cases remaining in Hospital; these, with the 2,290 admitted during the year made a total of 2,562 cases under treatment. Of this total, 2,127 were discharged, 190 died and 245 were in Hospital at the end of the year. The number of cases treated, 2,562, compares with 2,421 in 1937, and with 2,489, the average of the cases treated for the five years ended December 31st, 1937.

The cases treated were as follows :—

Scarlet Fever .....	613
Mixed Infections .....	42
Measles.....	189
Enteric Fever.....	60
Diphtheria.....	811
Erysipelas .....	96
Puerperal Fever.....	26
Tuberculosis .....	321
Other Diseases .....	404
	<hr/>
	2,562

The number of cases admitted from Out-districts\* was 740, as compared with 517 in 1937. An outbreak of diphtheria occurred at Ashton-under-Lyne and Stalybridge, necessitating accommodation elsewhere. Also, the Leigh Joint Hospital Board, during rebuilding, removed some cases to Ladywell. The daily average number of patients in 1938 was 261·8; the highest being 341 on February 22nd and March 17th, and the lowest 179 on July 30th; the daily average number of Out-district patients was 83·8, compared with 54·3 in 1937, and with 43·6 for the previous five years, 1932-36. 2,290 patients were admitted during the year, as compared with 2,180 in 1937, and with 2,238, the average for the five years ended December 31st, 1937. The following summary shows the diagnosis of the cases before admission and after observation in Hospital :—

	Diagnosis before Admission.	Diagnosis after Observation.
Scarlet Fever .....	577	548
Mixed Infections .....	4	42
Measles.....	167	167
Enteric Fever.....	62	59
Diphtheria.....	899	712
Erysipelas .....	101	86
Puerperal Fever.....	29	26
Tuberculosis .....	278	267
Other Diseases .....	173	383
	<hr/>	<hr/>
	2,290	2,290

\* Eccles, Farnworth, Irlam, Stretford, Urmston and Manchester Port Sanitary Authority.



Details of the alterations in diagnosis will be found in the Tables V and VI, pages 24 and 25. A tabulation of cases classified as " Other Diseases " will be found on page 18.

MIXED DISEASES.—Forty-two of the patients discharged were found to be suffering from two distinct diseases, as follows :—

Scarlet Fever and Diphtheria.....	15
Measles and Whooping Cough .....	7
Diphtheria and Whooping Cough .....	6
Diphtheria and Measles .....	5
Scarlet Fever and Whooping Cough.....	3
Scarlet Fever and Chicken Pox.....	2
Erysipelas and Diphtheria .....	1
Erysipelas and Cellulitis .....	1
Sinusitis and Septic Rash.....	1
Tonsillitis and Nasal Diphtheria Carrier.....	1
	—
	42
	—

DEATHS FROM MIXED DISEASES.—There were three deaths : Myocarditis and Arterio Sclerosis, 1 ; Diphtheria and Whooping Cough, 1 ; Erysipelas and Chronic Nephritis, 1.

The average stay in Hospital for all mixed diseases cases discharged well in 1938 was 41·8 days and for the fatal cases, 25·5 days.

CROSS-INFECTION.—With the large open wards and insufficient isolation accommodation, it has been difficult to prevent cross-infection. This has been stressed in previous annual reports. The Committee have fully recognised this, and the year under review saw the laying down of a New Cubicle Block for thirty-two patients ; it should be ready for opening in the summer of 1939. In addition to this, it is proposed to sub-divide two of the long wards into four smaller ones.

The number of patients discharged in 1938 who contracted another infection was as follows :—

Sent in as :—	Secondary Infection :—	
Diphtheria.....	Whooping Cough and Chicken Pox .....	2
Diphtheria.....	Chicken Pox .....	14
Diphtheria.....	Whooping Cough .....	2
Diphtheria.....	Scarlet Fever.....	8
Scarlet Fever .....	Chicken Pox .....	5
Scarlet Fever .....	Measles .....	2
Scarlet Fever .....	Diphtheria .....	7
		—
		40
		—

The average stay in Hospital for the 40 cross-infected cases discharged well in 1938 was 70·8 days.

The total number of cases discharged in 1938 was as follows :—

Disease.	Number.
Scarlet Fever .....	547
Mixed Infections .....	39
Measles.....	171
Enteric Fever.....	52
Diphtheria .....	677
Erysipelas .....	90
Puerperal Fever.....	25
Tuberculosis .....	177
Other Diseases .....	349
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	2,127
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The average stay in Hospital for all cases discharged well during 1938 was:— for scarlet fever 34·8 days ; for mixed infections 41·8 days ; for measles 27·1 days ; for enteric fever 56·9 days ; for diphtheria 51·1 days ; for erysipelas 18·5 days ; for puerperal fever 39·3 days ; for tuberculosis 83·6 days ; for other diseases 22·1 days.

DEATHS.—The total number of fatal cases in 1938 was :—

Disease.	Number.
Scarlet Fever (Septic).....	1
Mixed Infections .....	3
Measles.....	18
Enteric Fever.....	7
Diphtheria .....	23
Puerperal Fever.....	1
Tuberculosis .....	99
Broncho-pneumonia.....	8
Cellulitis.....	1
Cerebral Abscess .....	1
Cerebral Hæmorrhage.....	1
Cerebro-spinal Fever.....	4
Lobar Pneumonia .....	1
Meningitis .....	1
Pemphigus Neonatorum.....	1
Pneumococcal Meningitis.....	1
Septicæmia following abortion .....	1
Septic Arthritis (hip) .....	1
Streptococcal Meningitis.....	1
Tuberculous Meningitis.....	3
Whooping Cough.....	13
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	190
	<hr/>

The average stay in Hospital for all fatal cases, excepting advanced tuberculosis was 17·3 days. The average stay for advanced tuberculosis cases was 78·7 days.

The daily average number of patients in Hospital in 1938 was 261·8, as compared with 229·9 in 1937, and with 243·2 the daily average for the five years ended December 31st, 1937.

There were remaining in Hospital on December 31st, 1938, 245 cases, as compared with 272 last year. The cases remaining on December 31st, 1938, were :—scarlet fever 65; diphtheria 111; enteric fever 1; erysipelas 6; tuberculosis 45; and other diseases 17.

The daily average number of Out-district patients was 83·8; eighty-five of the cases remaining were from Out-districts, as compared with 92 the year before.

### DETAILED INFORMATION ABOUT SOME DISEASES.

#### Scarlet Fever.

The number of cases admitted was 548, as against 555 in 1937. 577 cases were certified as having scarlet fever, but in 45 cases the diagnosis had to be revised. In addition, 2 cases admitted as mixed infections, 1 as measles and 11 as diphtheria, and 2 as other diseases, proved to be scarlet fever. 547 cases were discharged well during the year, as against 550 last year. There was 1 death from this disease.

Details of the 1 fatal case of scarlet fever :—

Girl aged 16 months, complications—convulsions. 2 days in Hospital.

The type of the disease was mild. Scarlatinal antitoxin was given intramuscularly in 5-10 cc. doses to all but the very mildest cases, in addition, Sulphanilamide was given. The more important complications were as follows :—

	Cases affected.	Percentage of Discharged Cases.
Adenitis and Abscess (6).....	36	6·58
Rhinitis .....	8	1·46
Otorrhœa and Otitis Media (13).....	31	5·66
Relapse .....	3	·54

Other complications were as follows :—Albuminuria 3; arthritis 1; boils (legs) 1; bronchitis 3; conjunctivitis 1; dermatitis 1; ethmoiditis 1; furunculosis 2; impetigo 1; mastoiditis 1; nephritis 1; paronychia 6; rhinitis 2; sinusitis 1; styne 1; tonsillitis 1.



Fourteen cases contracted another infection whilst in Hospital :—Chicken pox 5 ; diphtheria 7 ; measles 2.

The average stay in Hospital for all cases discharged well was 34·8 days, and for the 1 fatal case 2 days.

The following table indicates the period of residence of the 533 cases of scarlet fever uncomplicated with another disease who were discharged well in 1938 :—

Week of Discharge	Number of days in Residence when Discharged.							Number of cases in each Day.							No. of Cases in each week.
Under fourth .....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Fourth.....	22	23	24	25	26	27	28	....	1	2	4	9	30	55	101
Fifth.....	29	30	31	32	33	34	35	74	85	78	49	25	21	11	343
Sixth.....	36	37	38	39	40	41	42	12	9	8	8	2	1	5	45
Seventh.....	43	44	45	46	47	48	49	4	3	2	4	1	....	....	14
Eighth.....	50	51	52	53	54	55	56	1	2	2	....	2	2	1	10
Ninth.....	57	58	59	60	61	62	63	....	1	2	1	1	....	1	6
Tenth.....	64	65	66	67	68	69	70	2	....	1	1	2	1	....	7
Over Tenth.....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	7

Total Number of Cases ..... 533

RETURN CASES.—Information about these is usually obtainable from Salford only. 1 such case was reported. This gives a return rate of 0·18 per cent. for Salford.

Schick Test in Scarlet Fever and Other Diseases.

The following table shows the age distribution of patients suffering from scarlet fever and other diseases who underwent the Schick test :—

	Age Periods.												Total
	Under 1 Yr.	1	2	3	4	5	6	7	8	9	10	Over 10	
Positive....	....	....	....	1	....	....	1	1	2	2	1	5	13
Negative .	....	....	1	....	3	....	3	7	7	8	4	24	57
Totals...	....	....	1	1	3	...	4	8	9	10	5	29	70

Immunised : 3 doses 62 ; 2 doses 35 ; 1 dose 2.

### Diphtheria.

899 cases were admitted certified as diphtheria, but in 193 cases the diagnosis had to be revised ; in addition, 6 other diseases proved to be diphtheria. The disease continued to show a fairly severe type as shown by the large proportion of severe cases. In a large number (139) of the most severe cases part of the antitoxin was given intravenously, in many instances repeatedly.

There were 23 deaths from this disease.

#### TYPE OF DISEASE.

Of the discharged cases 525 were faucial, 14 laryngeal, 20 nasal, 8 faucial and laryngeal, 6 faucial and nasal. There were also 104 cases of bacteriological diphtheria.

### Faucial Diphtheria.

In 546 cases, including 21 fatal ones, the throat was affected.

MILD.—224 cases were mild, the deposit on the throat being localised to the tonsils with little or no toxæmia. The average amount of serum given was 13,201 units. 39 cases had antitoxin before admission.

COMPLICATIONS AND SEQUELAE.—Adenitis 2 ; albuminuria 1 ; furunculosis 2 ; otitis media 8 ; palatal paralysis 1 ; tonsillitis 1.

MODERATE.—In 139 cases the membrane was more extensive and was accompanied by toxæmia. The average amount of serum given was 31,777 units. 15 cases received antitoxin before admission.

COMPLICATIONS AND SEQUELAE.—Adenitis 1 ; albuminuria 5 ; conjunctivitis 1 ; furunculosis 1 ; impetigo 2 ; nephritis 1 ; otitis media 4 ; palatal paresis 4 ; tonsillitis 1 ; whitlow 1.

SEVERE.—183 cases, including 21 fatal ones, were of the severe type. The amount of serum, on an average, given for the 162 cases discharged was 66,335 units, and for the 21 fatal cases 99,047 units. 15 of the discharged cases and 8 of the fatal cases received antitoxin before admission.

COMPLICATIONS AND SEQUELAE.—Albuminuria 3 ; albuminuria, palatal paresis, L. otorrhœa, rheumatic fever 1 ; albuminuria, palatal paralysis, pharyngeal paresis, B. facial paresis, bilateral otorrhœa 1 ; albuminuria, palatal

paresis 1 ; cardiac irregularity 2 ; erythema nodosum 1 ; otitis media 8 ; otorrhœa (R. and L.) furunculosis, palatal paresis 1 ; palatal paralysis 7 ; palatal paralysis, albuminuria 5 ; palatal paralysis, paresis of arm and leg muscles 1 ; palatal paralysis, pharyngeal paralysis 1 ; palatal paralysis, strabismus 1 ; palatal, ocular and facial paresis 1 ; palatal paresis 2 ; palatal paresis, otorrhœa 1 ; palatal paresis, albuminuria, hæmaturia 1 ; palatal paresis, pharyngeal paresis, albuminuria 1 ; palatal paresis, cardiac irregularity, bilateral otorrhœa 1 ; palatal paresis, hæmaturia, albuminuria 1 ; otorrhœa, palatal paralysis 1 ; otorrhœa dacrocystitis 1 ; suppurative cervical adenitis 1 ; otitis media 2 ; slight albuminuria, whitlows 1 ; suppurative right cervical adenitis, incision 1 ; tonsillitis 4 ; whitlow 1.

COMPLICATIONS OF FATAL CASES.—Circulatory paralysis 15 ; palatal, pharyngeal diaphragmatic paralysis and double otorrhœa 1.

### **Laryngeal Diphtheria.**

In 14 cases the larynx was involved, all recovered.

MILD.—In 7 cases the laryngeal obstruction was slight. The average amount of serum given was 22,300 units.

COMPLICATIONS.—Otorrhœa, adenitis 1.

MODERATE.—In 2 cases the laryngeal obstruction was moderately severe. The average amount of serum given was 40,000 units.

SEVERE.—5 cases which received an average of 50,800 units each.

COMPLICATIONS.—Tracheotomy (B.A.) 1 ; tracheotomy, abscess (neck) 1.

### **Faucial and Laryngeal Diphtheria.**

In 10 cases, including 2 fatal cases, the fauces and the larynx were involved.

MODERATE.—The 1 moderate case received 40,000 units of antitoxin.

SEVERE.—7 severe cases received an average of 80,000 units of antitoxin. The 2 other severe cases received an average of 60,000 units of antitoxin, but ended fatally, tracheotomy was unsuccessful in each case.

COMPLICATIONS.—Tracheotomy 5.



Nasal Diphtheria.

There were 20 cases of this type.

MILD.—The average amount of serum given to the 17 cases was 11,015 units.

COMPLICATIONS.—Pyelitis, otitis media 1 ; otitis media 2.

MODERATE.—The 2 moderate cases received an average of 30,000 units of serum.

SEVERE.—The 1 severe case received 40,000 units of serum.

Faucial and Nasal Diphtheria.

There were 6 cases of this type of diphtheria.

MILD.—The average amount of serum given to the 4 cases was 19,000 units.

COMPLICATIONS.—Impetigo 1 ; otitis media 1.

MODERATE.—The one moderate case received 32,000 units of serum.

COMPLICATIONS.—Otorrhœa, palatal paralysis, albuminuria 1.

SEVERE.—The one severe case received 32,000 units of antitoxin, and had 16,000 units of antitoxin before admission.

The following table summarises the sites of membrane in the total clinical cases discharged :—

Sites of Membrane.	Mild.		Moderate.		Severe.		Total.	
	Recovered	Died	Recovered	Died	Recovered	Died	Recovered	Died
Faucial.....	224	....	139	....	162	21	525	21
Laryngeal.....	7	....	2	....	5	....	14	....
Faucial and Laryngeal.....	....	....	1	....	7	2	8	2
Nasal.....	17	....	2	....	1	....	20	....
Faucial and Nasal ....	4	....	1	....	1	....	6	....
Totals.....	252	....	145	....	176	23	573	23

DIPHThERITIC PARALYSIS.—37 or 6·45 per cent. of the clinical cases discharged had paralysis in one form or another whilst in Hospital.

COMPLICATIONS.—140 or 24·4 per cent. of the recovered cases developed one or more complications. This figure does not include the serum rashes.

TRACHEOTOMY was performed in 8 cases, recovery following in 6, and 2 ending fatally.

FATALITY RATE.—23 or 3·85 per cent. of the clinical cases admitted proved fatal.

ANTITOXIN.—70 or 12·2 per cent. of the cases discharged and 8 of the fatal cases had antitoxin before admission to the Hospital. The average amount of serum given in Hospital to cases who recovered was 34,125 units and 95,230 units in the fatal cases. In addition, 151 cases, including 17 fatal cases, had part of the serum injected intravenously.

CROSS-INFECTION.—26 cases contracted other infections whilst in Hospital : Chicken pox 14 ; scarlet fever 8 ; whooping cough 2 ; whooping cough and chicken pox 2.

AVERAGE STAY.—The average stay in Hospital for all cases discharged well was 51·1 days and for the fatal cases 13·6 days.

Dick Test in Diphtheria.

The Dick test was performed in 709 cases of diphtheria. 342 of these were positive and 367 negative. The positive reactors were inoculated with scarlet fever prophylactic at intervals of 4 days (500, 2,000, 6,000, 15,000 skin test doses).

	Age Periods.												Totals
	Under 1 Yr.	1	2	3	4	5	6	7	8	9	10	Over 10	
Positive....	2	7	30	35	34	45	44	36	25	18	11	55	342
Negative .	....	13	13	10	22	24	20	47	32	31	20	135	367
Totals...	2	20	43	45	56	69	64	83	57	49	31	190	709

Enteric Fever.

Sixty-two cases were certified as having enteric fever, but 1 case proved to be constipation, and 2 cases bac. aertrycke infection. Most of the patients were from an outbreak in Farnworth, and were of a severe type. Nearly all received injections of Felix's Vi-serum in repeated doses of 33 cc's. This treatment undoubtedly improved the patients' condition, diminished the toxæmia and appeared to shorten the whole illness.

The average stay in Hospital for all cases discharged well was 56·9 days, and for the 7 fatal ones 8·4 days.

COMPLICATIONS OF THE DISCHARGED CASES.—Abscess (thigh) 1 ; brachial neuritis (arm) 1 ; cholecystitis 1 ; jaundice, cellulitis (thigh), relapse 1 ; laryngitis 1 ; lobar pneumonia, multiple boils ; L. femoral thrombosis, albuminuria 2 ; L. femoral thrombosis, bed sores, alopecia 1 ; L. femoral thrombosis 1 ; otorrhœa, abscess (thigh) 1 ; relapse 1 ; relapse, otorrhœa, mastoiditis operation 1.

COMPLICATIONS OF THE FATAL CASES—

Male aged 35 years—Perforation.

Remaining 6—No complications.

**Puerperal Sepsis.**

Twenty-nine cases were admitted, but in 4 cases the diagnosis was revised proving to be :—Influenza 1 ; bronchitis 1 ; septic abortion 1 ; septicæmia 1. In addition 1 case admitted as septic abortion was classified as puerperal sepsis.

There was 1 death from this disease, the patient with septicæmia recovering.

COMPLICATION OF FATAL CASE, AGE 31.—Heart disease.

The 25 discharged cases were classified as follows :—Puerperal sepsis 22 ; puerperal septicæmia 1 ; puerperal pyrexia 2 ; and the 1 fatal case as puerperal sepsis.

The average stay in Hospital for the discharged cases was 39·3 days, and for the 1 fatal case 21 days.

COMPLICATIONS IN DISCHARGED CASES.—Adenitis 1 ; bronchitis 1 ; phlegmasia alba dolens 2 ; phlegmasia, pelvic cellulitis 1 ; pyelitis 1.

There were 23 babies admitted with their mothers.

**Erysipelas.**

One hundred and one cases were admitted, but in 15 the diagnosis was revised.

There were no fatal cases.

The average stay in Hospital for the discharged cases was 18·5 days.



COMPLICATIONS OF THE DISCHARGED CASES.—Albuminuria 1 ; abscess (incision) 2 ; blepharitis, boils 1 ; cellulitis (neck) incision 1 ; cellulitis (scalp) 2 ; cellulitis (eyelid) 1 ; nephritis 1 ; nephritis, ulcerative colitis 1 ; laryngitis, conjunctivitis, hæmaturia 1.

### Measles.

Measles was prevalent during January, February and March, when 129 cases were admitted out of the year's total of 167.

One hundred and sixty-seven cases were certified as measles, but in 15 the diagnosis had to be revised ; in addition, 4 cases sent in as scarlet fever, 3 as diphtheria, and 8 other diseases, proved to be measles.

There were 18 deaths from this disease.

The average stay in Hospital for the discharged cases was 27·1 days and for the fatal cases 28·3 days.

COMPLICATIONS OF THE DISCHARGED CASES.—Abscess L. thigh (incision) 1 ; Ac. mastoiditis Schwartz's operation 1 ; adenitis 1 ; albuminuria, conjunctivitis 1 ; otitis media 23 ; bronchitis 1 ; broncho-pneumonia 4 ; broncho-pneumonia, abscess leg (incision) 1 ; broncho-pneumonia, otitis media, Rt. empyema 1 ; broncho-pneumonia, pyelitis 1 ; bronchitis, otorrhœa 2 ; broncho-pneumonia (O.A.) otorrhœa 3 ; empyema 1 ; eczema 1 ; gastro-enteritis 1 ; impetigo 2 ; suppurative otitis media, catarrhal jaundice 1 ; otorrhœa Rt. and Lt. and mastoid wound 1 ; purulent conjunctivitis 1 ; prolapse of rectum, abscess lower lip 1 ; pyelitis, abscess 1 ; suppurative cervical adenitis (incision) rectal prolapse 1 ; suppurative bilateral cervical adenitis, Lt. otitis media, bronchitis 1.

COMPLICATIONS OF THE FATAL CASES.—Broncho-pneumonia 8 ; broncho-pneumonia, convulsion 1 ; diarrhœa 2 ; enteritis, otorrhœa (Rt. and Lt.) 1 ; marasmus, broncho-pneumonia, diarrhœa 1 ; otorrhœa (R. and L.), broncho-pneumonia 2 ; rickets 1 ; Rt. otorrhœa, enteritis 1 ; stomatitis, broncho-pneumonia 1.

### Meningitis.

Twenty-five cases were admitted as some form of meningitis.

Fourteen proved to be cerebro-spinal fever of which 4 died ; treatment :—Combined serum (I.V. and I.T.) and Sulphanilamide.

Pneumococcal meningitis.—1 fatal.

Tuberculous meningitis.—2 fatal. Another tuberculous meningitis (fatal) was admitted certified as Ac. poliomyelitis.

Three proved to have lobar pneumonia with meningism—all recovered.

One had cerebral hæmorrhage—fatal.

One had whooping cough and measles.

One had whooping cough and broncho-pneumonia.

One had influenzal meningitis—recovered.

One cerebral abscess—fatal.

### Whooping Cough.

Seventy-one cases were certified as whooping cough, but 57 only of these were confirmed, in addition, 16 other patients had whooping cough in association with other diseases. 13 patients died :—

Six were under 12 months old.

Four were between 1 and 2 years old.

One was  $2\frac{1}{2}$  years, 1 was  $3\frac{1}{2}$  years, and 1 four years of age.

STAFF.—On December 31st, 1938, the resident staff of the Sanatorium and Isolation Hospital consisted of the following :—

Medical Superintendent .....	1
Assistant Medical Officers .....	2
City Bacteriologist .....	1
Matron .....	1
Assistant Matron and Home Sister.....	1
Sister Tutor .....	1
Stores Sister .....	1
Night Sister .....	1
Ward Sisters.....	8
Staff Nurses .....	12
Assistant Nurses .....	10
Probationers .....	32
Cook .....	1
Assistant Cook .....	1
Domestics .....	33
Laundress .....	1
Lodge Porters .....	2
<hr/>	
Total Resident Staff .....	109
<hr/>	

The Non-Resident Staff consisted of :—

Visiting Aural Surgeon .....	1
Tuberculosis Officers .....	2
Clerk .....	1
Junior Clerks .....	2
Engineer .....	1
Plumber .....	1
Joiner .....	1
Firemen .....	3
Gardener .....	1
Assistant Gardeners .....	2
Porters .....	6
Seamstresses .....	2
Cleaners .....	4
	—
Total Non-Resident Staff .....	27
	—

HEALTH OF STAFF.—The following were the illnesses :—Abdominal pains 2 ; abscess (groin) 1 ; arthritis (ankle) 1 ; burn (foot) 1 ; chicken pox 2 ; cold 10 ; diphtheria 3 ; fainting 1 ; fibrosis 1 ; gastritis 1 ; influenza 2 ; ingrowing toe nail 1 ; nausea 3 ; rheumatism 2 ; scalded foot 2 ; septic finger 1 ; sore throat 17 ; tonsillitis 2.

The staff lost 816 working days through illness.

The staff, both nurses and maids, are tested on entering by the Schick and Dick tests, and, if positive, immunised against diphtheria and scarlet fever.

Fifty-one were Schick tested and 17 were positive—these were inoculated with three doses of Toxoid-Antitoxin floccules at fortnightly intervals, and on retest, 4 proved to be negative and the remaining 13 left.

Forty-six were tested by the Dick test, 4 being positive—these were inoculated with 500, 2,000, 6,000, 15,000 skin test doses of scarlatinal toxin, and retest a month later proved 1 negative and the remaining 3 left.

From August to December 110 members of the staff were inoculated with anti-typhoid vaccine.

One nurse developed moderate faucial diphtheria before being immunised, but recovered in 45 days.

One nurse developed moderate faucial diphtheria which lasted 34 days, and was Schick tested before coming to Ladywell.



One nurse who had been immunised developed mild diphtheria which lasted 36 days.

WORK OF THE TRAINING SCHOOL.—During the year, 9 nurses passed the Preliminary, and 19 the Final State Examinations. The usual course of lectures was given by the Medical Staff and the Sister Tutor.

### Operating Theatre.

The number of operations in the theatre was 9, all requiring general anæsthesia ; minor operations are not included ; numerous incisions, aspirations, tracheotomies, etc., were done in the wards, mostly requiring local anæsthesia only.

Particulars of the operations in the theatre are :—

Disease.	Complications.	Operation.	Recov.	Died.	Total.
Typhoid Fever....	Perforation .....	Laparotomy .....	—	1	1
Diphtheria .....	—	Tonsils and Adenoids....	1	—	1
Diphtheria and Measles.	—	Nasal Examination .....	1	—	1
Scarlet Fever .....	—	Schwartz Mastoid .....	1	—	1
Typhoid Fever....	Mastoiditis ....	Schwartz Mastoid .....	1	—	1
Measles .....	Mastoiditis .....	Schwartz Mastoid .....	1	—	1
Otitis Media.....	Streptococcal Meningitis.	Schwartz Mastoid .....	—	1	1
Diphtheria .....	Supp. Adenitis	Schwartz Mastoid .....	1	—	1
Whooping Cough	—	Schwartz Mastoid .....	—	1	1
			6	3	9

### Bed Isolation Wards.

These wards contain 32 beds. Each patient is nursed separately from the others and nothing which has been in contact with the patient or anything from his bed is allowed to touch any other patient or bed unless it has been sterilised. This sterilisation is done by steam if possible, or by disinfection with liquid disinfectants. Nurses have to wear separate gowns, and scrub their hands every time they attend a patient.

Free ventilation is also insisted upon.

All diseases, except early measles or chicken pox, were admitted. The wards were busy all through the year, the demand for isolation being always great.

Two hundred and nine cases were admitted during the year, as against 260 in 1937.

The following is a table of the diseases :—

Sent in as :—		Diagnosis after observation.	
Scarlet Fever .....	37	Scarlet Fever.....	21
		Coryza.....	2
		Erythema.....	1
		Follicular tonsillitis .....	1
		Food Rash.....	1
		Influenza.....	1
		Measles .....	1
		Pneumonia.....	1
		Scabies .....	1
		Scarlet Fever and Diphtheria.....	1
		Septic Rash.....	1
		Sinusitis and Septic Rash .....	1
		Sore Throat.....	1
		Tonsillitis .....	3
Diphtheria.....	90	Diphtheria .....	50
		Diphtheria and Scarlet Fever.....	1
		Diphtheria and Whooping Cough .....	3
		Coryza.....	1
		Laryngitis.....	2
		Measles .....	1
		Otorrhœa .....	1
		Positive Swab.....	3
		Rheumatic Endocarditis and Nasal Diphtheria .....	1
		Rhinitis.....	1
		Scarlet Fever.....	7
		Scarlet Fever and Diphtheria.....	3
		Tonsillitis .....	16
Measles.....	8	Measles .....	8
Scarlet Fever and Diphtheria	1	Scarlet Fever.....	1
Enteric.....	34	Enteric .....	32
		Bact. Aertycke Infection .....	1
		Constipation.....	1
Cerebro-spinal Fever.....	11	Cerebro-spinal Fever .....	9
		Cerebral Hæmorrhage .....	1
		Tuberculous Meningitis.....	1
Cerebro-spinal Meningitis.....	4	Cerebro-spinal Meningitis .....	2
		Lobar Pneumonia.....	1
		Pneumoccal Meningitis .....	1
Chicken Pox.....	1	Chicken Pox .....	1
Whooping Cough.....	3	Whooping Cough .....	2
		Bronchitis.....	1
Croup .....	1	Laryngitis.....	1
Meningitis .....	2	Septic-broncho-pneumonia .....	1
		Whooping Cough and Measles.....	1
Adenitis .....	1	Adenitis .....	1
Rubella .....	1	Scarlet Fever.....	1
Puerperal Fever.....	1	Puerperal Sepsis.....	1
Ant. Poliomyelitis .....	1	Tuberculous Meningitis .....	1
Pneumonia .....	1	Broncho-pneumonia .....	1
Erysipelas .....	12	Erysipelas.....	11
		Impetigo.....	1
209		209	

TABULATION OF CASES WHICH HAVE BEEN CLASSIFIED AS  
" OTHER DISEASES " AFTER OBSERVATION.

Abscess .....	1	Pemphigus Neonatorum .....	1
Adenitis .....	3	Peridental Abscess .....	2
Alveolar Abscess .....	1	Peritonsillar Abscess .....	6
Backache .....	1	Pneumonia .....	13
Bac. Aertrycke .....	2	Pneumococcal Meningitis .....	1
Bronchitis .....	11	Pneumonitis .....	1
Cellulitis .....	3	Pleurisy .....	1
Cerebro-spinal Fever .....	14	Pustular Dermatitis .....	2
Cerebral Abscess .....	1	Purulent Conjunctivitis .....	1
Cerebral Hæmorrhage .....	2	Rhinitis .....	1
Chicken Pox .....	4	Rubella .....	2
Constipation .....	1	Scabies .....	1
Convalescent after Operation .....	1	Sciatica .....	2
Coryza .....	8	Septic Abortion .....	2
Eczema .....	2	Septicæmia .....	1
Erythema .....	5	Septic Rash .....	3
Food Rash .....	1	Septic Arthritis .....	1
Gastritis .....	1	Septic Throat .....	3
Gastro-enteritis .....	2	Sinusitis .....	3
Herpes Zoster Ophthalmicus .....	1	Sore Throat .....	3
Impetigo .....	3	Streptococcal Sore Throat .....	1
Influenza .....	8	Streptococcal Meningitis .....	1
Laryngitis .....	11	Tonsillitis .....	131
Laryngeal Obstruction (f.b.) .....	1	Tuberculous Meningitis .....	3
Lupus Erythematosus .....	1	Vincent's Angina .....	1
Malaria .....	1	Whooping Cough .....	60
Meningitis (influenzal) .....	1	With Mother .....	23
Observation .....	19		
Otitis Media .....	1		—
Otorrhœa (L.) .....	1		383
Pemphigus .....	1		—



TABLE I.

STATEMENT OF THE NUMBER OF PATIENTS UNDER TREATMENT IN  
LADYWELL SANATORIUM AND ISOLATION HOSPITAL IN 1938.

	Males.		Females.		Totals.
	Under 5 years.	Over 5 years.	Under 5 years.	Over 5 years.	
1.—PATIENTS REMAINING IN HOSPITAL ON DECEMBER 31ST, 1937, AFFECTED WITH :					
Scarlet Fever.....	17	17	13	18	65
Mixed Infections.....	....	....	....	....	....
Measles.....	8	5	6	3	22
Enteric Fever.....	....	1	....	....	1
Diphtheria .....	19	32	14	34	99
Erysipelas.....	....	5	....	5	10
Puerperal Fever.....	....	....	....	....	....
Tuberculosis.....	....	34	....	20	54
Other Diseases.....	11	....	7	3	21
Totals.....	55	94	40	83	272
2.—ADMITTED DURING THE YEAR ENDED DECEMBER 31ST, 1938, AFFECTED WITH :					
Scarlet Fever.....	100	156	110	182	548
Mixed Infections.....	11	13	13	5	42
Measles.....	83	8	70	6	167
Enteric Fever.....	1	26	4	28	59
Diphtheria .....	131	203	121	257	712
Erysipelas.....	....	40	2	44	86
Puerperal Fever.....	....	....	....	26	26
Tuberculosis.....	....	155	1	111	267
Other Diseases.....	96	85	74	128	383
Totals.....	422	686	395	787	2290
Totals under treatment, 1938.....	477	780	435	870	2562
3.—OF THE ABOVE THERE WERE DISCHARGED RECOVERED FROM :					
Scarlet Fever.....	104	149	112	182	547
Mixed Infections.....	11	13	12	3	39
Measles.....	80	12	71	8	171
Enteric Fever.....	1	21	4	26	52
Diphtheria .....	129	200	104	244	677
Erysipelas.....	....	43	2	45	90
Puerperal Fever.....	....	....	....	25	25
Tuberculosis.....	....	93	1	83	177
Other Diseases.....	92	70	68	119	349
Totals.....	417	601	374	735	2127

TABLE I.—continued.

STATEMENT OF NUMBER OF PATIENTS.—continued.

	Males.		Females.		Totals.
	Under 5 years.	Over 5 years.	Under 5 years.	Over 5 years.	
4.—DIED FROM :					
Scarlet Fever.....	....	....	1	....	1
Mixed Infections.....	....	....	1	2	3
Measles.....	11	1	5	1	18
Enteric Fever.....	....	5	....	2	7
Diphtheria .....	4	6	5	8	23
Erysipelas.....	....	....	....	....	....
Puerperal Fever.....	....	....	....	1	1
Tuberculosis.....	....	69	....	30	99
Other Diseases .....	12	10	11	5	38
Totals.....	27	91	23	49	190
5.—REMAINING IN HOSPITAL ON DECEMBER 31ST, 1938, AFFECTED WITH :					
Scarlet Fever.....	13	24	10	18	65
Mixed Infections.....	....	....	....	....	....
Measles.....	....	....	....	....	....
Enteric Fever.....	....	1	....	....	1
Diphtheria .....	17	29	26	39	111
Erysipelas.....	....	2	....	4	6
Puerperal Fever.....	....	....	....	....	....
Tuberculosis.....	....	27	....	18	45
Other Diseases.....	3	5	2	7	17
Totals.....	33	88	38	86	245

TABLE II.

MONTHLY STATEMENT OF PATIENTS FOR THE YEAR ENDED DECEMBER 31ST, 1938 ;  
TOGETHER WITH A COMPARISON WITH THE YEAR 1937, AND WITH THE MEAN  
OF THE FIVE (5) AND FIFTY-FIVE (55) YEARS ENDED DECEMBER 31ST, 1937.

Month.	Admissions, 1938.	Admissions, 1937.	Mean of Admissions, 5 years, 1933-1937.	Mean of Admissions, 55 years, 1883-1937.	Daily Average No. of Patients in Hospital, 1938.	Daily Average No. of Patients in Hospital, 1937.	Mean of Daily Average No. of Patients in Hospital, 5 years, 1933-1937.	Mean of Daily Average No. of Patients in Hospital, 55 years, 1883-1937.
January.....	276	193	205.6	128.5	282.8	269.4	260.4	158.7
February.....	233	172	193.0	108.4	325.7	266.0	266.4	152.5
March.....	250	163	195.4	114.9	325.5	243.3	258.8	189.8
April.....	184	187	178.6	107.4	300.8	235.4	248.0	137.4
May.....	161	133	167.2	117.0	257.2	194.2	222.8	133.0
June.....	129	176	156.8	108.2	211.0	199.7	209.8	128.6
July.....	127	169	161.0	116.0	194.7	202.3	214.5	136.3
August.....	199	147	154.2	113.1	209.0	191.6	207.0	137.6
September.....	200	179	181.2	136.0	260.3	206.6	219.4	151.5
October.....	173	196	225.8	160.9	257.4	230.0	256.3	172.8
November.....	187	236	221.6	150.0	263.5	260.4	286.2	185.4
December.....	171	229	198.0	132.8	253.6	259.8	270.2	173.3
Totals.....	2290	2180	....	....	....	....	....	....
M'thly Averages	190.8	181.8	186.5	124.4	261.8	229.9	243.3	154.7



TABLE III.

SHOWING THE NUMBER OF ADMISSIONS OF THE PRINCIPAL INFECTIOUS DISEASES FOR THE YEAR ENDED DECEMBER 31ST, 1938; ALSO A COMPARISON WITH THE YEAR 1937, AND WITH THE MEAN OF THE FIVE YEARS AND FIFTY-FIVE YEARS ENDED DECEMBER 31ST, 1937.

Month.	Scarlet Fever.	Mixed Infections.	Measles.	Enteric Fever.	Typhus Fever.	Diphtheria.	Erysipelas.	Puerperal Fever.	Smallpox.	Tuberculosis.	Other Diseases.	Totals.
January.....	37	9	56	....	....	79	14	5	....	28	48	276
February.....	32	6	38	2	....	81	13	2	....	21	38	233
March.....	62	4	31	....	....	91	9	3	....	23	27	250
April.....	39	2	21	....	....	51	7	5	....	25	34	184
May.....	33	4	5	1	....	52	7	1	....	23	35	161
June.....	35	1	2	1	....	34	8	3	....	21	24	129
July.....	38	2	1	....	....	39	4	....	....	22	21	127
August.....	46	4	2	43	....	47	2	....	....	25	30	199
September.....	52	5	5	5	....	66	3	4	....	22	38	200
October.....	62	....	1	6	....	48	3	3	....	20	30	173
November.....	60	1	2	1	....	61	8	....	....	21	33	187
December.....	52	4	3	....	....	63	8	....	....	16	25	171
Totals, 1938.....	548	42	167	59	....	712	86	26	....	267	383	2290
Totals, 1937.....	555	24	117	8	....	594	77	32	....	249	524	2180
Increase, 1938..	....	18	50	51	....	118	9	....	....	18	....	110
Decrease, 1938..	7	....	....	....	....	....	....	6	....	....	141	....
Mean of 5 years 1933-1937.....	590.0	37.2	121.6	6.0	....	724.2	70.2	23.6	....	271.8	393.8	2238.4
Mean of 55 years— 1883-1937.....	791.3	8.0	15.7	100.7	3.9	282.0	38.4	12.7	11.0	82.2	159.6	1506.8

TABLE IV.

ANNUAL STATEMENT.

Disease.	No. of Cases Remaining on Dec. 31st, 1937.	No. of Cases Treated.	No. of Cases Admitted.	No. of Cases Discharged.	No. of Deaths.	No. of Cases Remaining on Dec. 31st, 1938.
Scarlet Fever.....	65	613	548	547	1	65
Mixed Infections.	....	42	42	39	3	....
Measles .....	22	189	167	171	18	....
Enteric Fever ...	1	60	59	52	7	1
Diphtheria.....	99	811	712	677	23	111
Erysipelas.....	10	96	86	90	....	6
Puerperal Fever	....	26	26	25	1	....
Tuberculosis.....	54	321	267	177	99	45
Other Diseases....	21	404	383	349	38	17
Totals .....	272	*2562	†2290	2127	190	‡245
Corresponding figures, 1937		2421	2180	1998	151	272
Average, five years 1933-37		2489	2238.4	2071.4	154.0	263.6

CASES FROM "OUT-DISTRICTS."

1938 .....	*832	†740	‡85
Corresponding figures, 1937 .....	595	517	92





TABLE VI.

Sent in as :—		After Observation.	
Abscess.....	1	Abscess .....	1
Adenitis .....	1	Adenitis .....	1
Backache .....	1	Backache .....	1
Chicken Pox.....	3	Chicken Pox .....	3
Cerebro-spinal Fever.....	7	Cerebro-spinal Fever .....	5
		Cerebral Abscess.....	1
		Influenzal Meningitis.....	1
Cerebro-spinal Meningitis.....	7	Cerebro-spinal Meningitis .....	3
		Cerebro-spinal Fever .....	2
		Cerebral Hæmorrhage .....	1
		Pneumococcal Meningitis .....	1
		Pneumonia .....	1
Convalescent.....	1	Convalescent .....	1
Coryza .....	1	Coryza.....	1
Cold .....	2	Influenza .....	1
		Tonsillitis .....	1
Croup .....	5	Diphtheria .....	4
		Laryngitis.....	1
Encephalitis Lethargica .....	1	Influenza .....	1
Influenza .....	1	Influenza .....	1
Malaria.....	1	Malaria .....	1
Meningitis .....	9	Cerebro-spinal Fever .....	4
		Pneumonia .....	2
		Tuberculous Meningitis.....	1
		Whooping Cough and Measles.....	1
		Whooping Cough and Pneumonia.....	1
Observation.....	2	Chicken Pox .....	1
		Scarlet Fever.....	1
Pemphigus.....	3	Pemphigus .....	1
		Pemphigus Neonatorum .....	1
		Pustular Dermatitis .....	1
Pemphigus Neonatorum.....	1	With Mother .....	1
Pleurisy .....	2	Pleurisy.....	1
		Tuberculosis.....	1
Poliomyelitis.....	3	Cerebral Hæmorrhage .....	1
		Septic Arthritis (hip).....	1
		Tuberculous Meningitis.....	1
Pneumonia .....	11	Pneumonia .....	2
		Bronchitis.....	2
		Measles .....	4
		Pneumonia and Measles .....	1
		Whooping Cough .....	2
Purulent Conjunctivitis .....	1	Purulent Conjunctivitis.....	1
Rubella .....	1	Scarlet Fever.....	1
Sciatica .....	2	Sciatica.....	2
Septic Abortion .....	2	Septic Abortion.....	1
		Puerperal Fever .....	1
Sore Throat .....	8	Tonsillitis .....	6
		Diphtheria .....	1
		Influenza.....	1

TABLE VI—continued.

Sent in as :—		After Observation.	
Tonsillitis.....	2	Tonsillitis .....	2
Tuberculous Meningitis.....	1	Tuberculous Meningitis .....	1
Whooping Cough.....	71	Whooping Cough .....	55
		Bronchitis.....	9
		Diphtheria .....	1
		Measles .....	4
		Measles and Whooping Cough.....	1
		Laryngitis.....	1
With Mother.....	21	With Mother .....	21
	<hr/> 173 <hr/>		<hr/> 173 <hr/>

**Immunisation against Diphtheria.**

The following statistics relate to the work in connection with immunisation carried out in the Department during the whole of 1938.

**PERSONS COMPLETING THE COURSE DURING 1938.**

	Number of Persons.
Maternity and Child Welfare Clinics and Centres	164
Various Schools .....	193
Ladywell Sanatorium—Patients .....	62
Staff .....	17
	<hr/> 436 <hr/>

**ATTENDANCES AT CLINICS AND SCHOOLS DURING 1938.**

	Number of attendances.
Maternity and Child Welfare Clinics and Centres	1,226
Various Schools .....	1,734
	<hr/> 2,960 <hr/>

The above-mentioned figures show a decrease of 49 in persons completing the course and an increase of 551 in attendances at Clinics and Schools, as compared with the corresponding figures for 1937. The number of children immunised under the Maternity and Child Welfare Scheme was reduced from 364 to 164, while the number of children immunised at the Schools increased from 52 to 193.

It cannot but be admitted that the results obtained in respect of children of pre-school age—the most important period from the point of view of immunisation—are not satisfactory, but it should be borne in mind that the figures do not present a true picture. Many mothers bring their children to the Maternity and Child Welfare Clinics for the required number of protective injections but fail to complete their attendances for the final Schick test. Such cases as these, of which there are a considerable number, are not included as “ completions ” because, in the absence of the conclusive Schick test, they are not regarded as having completed the course. Even so, the response by the public can only be held to be disappointing. Every effort is made by the Health Visiting staff by means of personal persuasion to induce parents to permit their children to be immunised, but it would appear that nothing short of a serious outbreak of diphtheria will induce more than a small proportion to agree to this course.

The position in the case of school children is more satisfactory but here again, difficulty is experienced in obtaining a really adequate response. The fact appears to be that the interest shown by the public in immunisation varies inversely with the degree of protection attained.



## SECTION IIIA.

## Venereal Diseases Scheme.

## ANNUAL REPORT, 1938.

During the year there have been changes in the Medical and Nursing Staffs. Dr. R. C. Webster, M.D., D.P.H., Assistant V.D. Medical Officer, resigned to go to Bolton. Miss J. Norman, an able and efficient Senior Nurse, died in March. Dr. S. K. Appleton, M.D., D.P.H., D.T.M., was appointed Assistant V.D. Medical Officer, and Nurse B. M. Cowin was promoted to the post of Senior Nurse. Nurse M. Mullen, from the Manchester and Salford Skin Hospital, was appointed Junior Nurse.

At present the Staff of the Municipal Clinic consists of :—

MEDICAL.	{	V.D. Medical Officer.
		Assistant V.D. Medical Officer (male).
		"      "      "      "      (female).
		Part-time Assistant V.D. Medical Officer (male).
NURSING.	{	1 Senior Nurse.
		2 Junior Nurses.
		1 Senior Orderly.
OFFICE.	{	5 Junior Orderlies.
		1 Clerk-Dispenser.
		1 Junior Clerk.

The Municipal Clinic is at 155, Regent Road, Salford, and is open during the following hours :—

Monday to Friday.....	8-30 a.m. to 8-30 p.m.
Saturday .....	8-30 a.m. to 12-30 p.m.
	7 p.m. to 8-30 p.m.
Sunday.....	9-30 a.m. to 12-30 p.m.
	3-30 p.m. to 6-30 p.m.

## New Cases.

There was an increase in the number of new cases during the year, as compared with 1937. 1,961 new cases were dealt with during 1938. Of this number, 1,015 cases were found to be suffering from Venereal Diseases, and the remaining 946 were found to be suffering from conditions other than venereal. Legally, Venereal Diseases comprise Syphilis, Gonorrhœa and Chancroid. Cases labelled non-venereal are those suffering from balanitis, scabies, phimosis, paraphimosis, warts and other conditions usually acquired or aggravated by illicit sexual intercourse. In all these instances the patients are kept under observation until the incubation periods of Gonorrhœa, Chancroid and Syphilis have passed. In Table I new cases for the past eleven years are tabulated.

**TABLE I.**  
(New Cases).

Year.	V.D. Cases.	Non-V.D. Cases.	Total Cases.
1928 .....	880	340	1,220
1929 .....	1,261	704	1,965
1930 .....	1,233	1,067	2,300
1931 .....	1,125	1,071	2,196
1932 .....	1,055	1,063	2,118
1933 .....	1,079	999	2,078
1934 .....	1,062	909	1,971
1935 .....	976	904	1,880
1936 .....	1,020	941	1,961
1937 .....	937	931	1,868
1938 .....	1,015	946	1,961
Total .....	11,643	9,875	21,518

This Table embraces Items 3 and 4 of V.D. (R.) Forms for years shown.

In Table II venereal cases are further analysed under their disease headings, and the percentage rates shown. It will be seen from this table that the lowest number of Syphilis cases was obtained in 1938. The number of new cases suffering from Syphilis during the year 1938 was less than half the number shown in 1930. This is in agreement with the findings throughout the country. There has been a gradual diminution of the new cases of Syphilis, particularly fresh infections, during the past ten years. Unfortunately, the same cannot be stated for gonococcal infections. The average number of patients with gonococcal infections per annum is 691 during the past ten years. The actual number of gonococcal infections for the year 1938 is 733. It is hoped that the advent of Chemotherapy in the treatment of Gonorrhœa will be a factor in reducing these infections.

**TABLE II.**  
(Venereal Patients Only).

Year.	DISEASE.				PERCENTAGE.			
	Sy.	G.	Ch.	N.V.	Sy.	G.	Ch.	N.V.
1928 .....	266	599	15	340	21·8	49·0	1·00	28·2
1929 .....	439	743	20	701	23·0	39·0	1·00	37·0
1930 .....	437	776	20	1,067	19·0	33·7	0·80	46·5
1931 .....	424	699	2	1,071	19·3	31·8	0·09	48·8
1932 .....	413	639	3	1,063	19·4	30·1	0·10	50·4
1933 .....	338	722	19	999	21·1	34·7	0·90	52·3
1934 .....	262	721	79	909	13·2	36·5	4·00	46·3
1935 .....	259	678	39	904	13·8	36·0	2·10	48·1
1936 .....	283	673	64	941	14·4	34·4	3·30	47·9
1937 .....	238	660	39	931	12·7	35·3	2·10	49·9
1938 .....	209	733	73	946	10·7	37·4	3·70	48·2
Total .....	3,568	7,643	373	9,872	16·6	35·6	1·8	46·0

This Table embraces Items 3 and 4 of V.D. (R.) Forms for years shown.

**Sex Incidence.**

There were 820 male and 195 female new patients suffering from venereal diseases. Compared with 1937 the increase is mainly in the male patients. The number of female patients is almost the same for the two years. The ratio between the sexes is about 4 to 1. That is to say, for every woman suffering from venereal disease there are four men with the same condition. The annual incidence of new venereal cases, classified according to sex, during the past eleven years is shown in Table III.

**TABLE III.**  
(Sex Incidence).

Year.	Males.	Females.	Percentage	
			Males.	Females.
1928.....	761	119	86·5	13·5
1929.....	1,080	181	85·7	14·3
1930.....	1,002	231	81·3	18·7
1931.....	920	205	81·8	18·2
1932.....	810	245	76·8	23·2
1933.....	822	257	76·2	23·8
1934.....	825	237	75·6	24·4
1935.....	741	235	75·9	24·1
1936.....	790	230	77·5	22·5
1937.....	743	194	79·3	20·7
1938.....	820	195	80·8	19·2
Total.....	9,314	2,329	80·0	20·0

This Table embraces Items 3 and 4 of V.D. (R.) Forms for years shown.

**Fresh Infections and Old Infections.**

A “ Fresh Infection ” is defined as one in which the disease is less than twelve months old, and an “ Old Infection ” is one where the disease has been in existence for more than a year. The figures in Tables IV and V represent a satisfactory state of affairs. Thus, of 7,686 new male cases of venereal diseases during the past ten years, 6,740 were infections of less than twelve months’ duration. Of 2,070 new female cases of venereal diseases, 1,590 were infections of no longer duration than one year.



TABLE IV.

(Males).

Year.	FRESH INFECTIONS.				OLD INFECTIONS.			
	Sy.	Gon.	Ch.	Total.	Sy.	Gon.	Ch.	Total.
1929.....	32	639	20	691	23	18	—	41
1930.....	192	575	20	787	134	81	—	215
1931.....	148	564	2	714	96	21	—	117
1932.....	201	466	3	670	107	11	—	118
1933.....	97	511	19	627	106	19	—	125
1934.....	86	489	77	652	72	15	—	87
1935.....	94	490	38	622	50	13	—	63
1936.....	122	474	60	656	67	3	—	70
1937.....	90	493	37	620	54	2	—	56
1938.....	82	548	71	701	47	7	—	54
Total ....	1,144	5,249	347	6,740	756	190	—	946

The corresponding figures for female cases will be found in Table V.

TABLE V.

(Females).

Year.	FRESH INFECTIONS.				OLD INFECTIONS.			
	Sy.	Gon.	Ch.	Total.	Sy.	Gon.	Ch.	Total.
1929.....	74	86	—	160	21	—	—	21
1930.....	53	99	—	152	58	21	—	79
1931.....	51	74	—	125	52	9	—	61
1932.....	39	103	—	142	61	15	—	76
1933.....	38	144	—	182	40	14	—	54
1934.....	23	145	—	168	33	20	—	53
1935.....	25	136	—	161	33	13	—	46
1936.....	37	158	—	195	22	5	—	27
1937.....	21	129	—	150	30	3	—	33
1938.....	11	143	1	155	30	—	—	30
Total ....	372	1,217	1	1,590	380	100	—	480

These figures do not include cases shown in Items 2 and 4 of Forms V.D. (R.) or Congenital Cases of Syphilis.

**Attendances.**

The total number of attendances since the Clinic opened is 961,882. The average annual number of total attendances during the past eleven years is 87,443, the highest number being in 1932 and the lowest in 1928. Total attendances during the year are lower than those in 1937, although there were more new cases during the year and the rate of defaulting was almost the same for both years. The explanation of this drop in attendances is chiefly that patients suffering from Gonorrhœa are cured in a much shorter time, and partly by the fact that the lowest number of new Syphilitic patients was recorded in the year 1938.

**TABLE VI.**  
**(Attendances).**

Year.	Intermediate.	Medical Officer.	Total Attendances.
1928 .....	26,155	9,348	35,503
1929 .....	44,443	26,163	70,606
1930 .....	53,958	38,996	92,954
1931 .....	60,216	40,706	100,922
1932 .....	58,981	42,485	101,466
1933 .....	55,700	39,028	94,728
1934 .....	59,739	36,767	96,506
1935 .....	55,321	34,656	89,977
1936 .....	60,267	37,530	97,797
1937 .....	56,669	36,593	93,262
1938 .....	51,699	36,462	88,161
Total .....	583,148	378,734	961,882

**Defaulting.**

The question of defaulting among venereal disease patients is important and full of difficulties. The importance of it is appreciated when it is realised that about one-third of the patients discontinued attending the Treatment Centres in England and Wales during the year 1937. Although all these patients are not in the infectious stages, a certain proportion of them are responsible for the spread of venereal diseases. It is well known that the man, or woman, who considers himself cured, is the chief disseminator of Gonorrhœa and Syphilis.

At the Salford Treatment Centre the rate of defaulting among patients of both sexes has not been higher than 13 per cent. during the past eight years. The rate of defaulting among women is 6·3 per cent. for the year 1938 and has never been more than 8·06 per cent., whilst the rate for men was 1·99 per cent. and has never been more than 3·75 per cent. during the past eight years. These percentages refer to what is known as "Dangerous Defaulters," that is, the patients who are infectious and ceased attending the Clinic in that stage. It will be seen from Table VII that the rate of defaulting among women is much higher than that for men, and there is still room for improvement here.

The Salford V.D. Treatment Centre attracts patients of both sexes chiefly by the fact that it is open from 8-30 a.m. to 8-30 p.m. and is staffed by a keen Nursing and Medical Staff. There is no Local Branch of the British Social Hygiene Council in Salford, and no Almoner is attached to the Treatment Centre. The Social Service is carried out by Medical Officers and Nurses, and in spite of every effort this appears to be not so successful among women as amongst men.

The problem of defaulting is closely related to that of Venereal Diseases. These diseases are contracted in the majority of cases through sexual intercourse, and therefore present moral and social aspects in addition to their medical ones. These diseases also have a moral stigma attached to them. These moral and social aspects play an important role in defaulting among men, and more particularly among women.

If, somehow, the stigma attached to these diseases could be removed, then the problem of reducing the incidence of defaulting could be solved with ease. The fact that the majority of V.D. victims acquire their disease through sexual intercourse forces them to shame, secrecy and fear.

The secrecy is difficult to maintain. Special Clinics soon become known among the population. Patients might meet in the Clinic not only their neighbours but even friends and relatives, and they are afraid of being seen. As the result of this many women discontinue treatment. They cannot run the risk of being found out and so lose their moral and social status.

The worst type of defaulter is the young prostitute. Not many of these attend the Salford Centre ; but nearly all those that attend invariably default, and the follow up letter is returned marked " unknown at this address."

The second type of defaulter is usually a young pregnant girl infected with Syphilis or Gonorrhœa, or both. Usually these girls are admitted to Hospital and treated. They usually default during the observation period when on tests for cure.

The third group, and these are in the majority, consists of married women who have had the misfortune to be infected by their husbands, who in turn thought they were cured before they married or before they had connections with their wives. Such women need very careful handling on their first visit. Their anger is great, they are shocked and feel that the end of their life has arrived. An understanding and sympathetic Medical Officer or Nurse can work wonders with this type of case ; persuade her to accept treatment, and save her happiness and her home.

What is to be done with the fourth type of woman, who infects her victim and is informed by him that the Medical Officer of the Treatment Centre advises her to be examined ? Her reply to her victim is that she is quite well, and there is nothing wrong with her. This type of woman refuses advice and examination, and probably helps the spread of Gonorrhœa and Syphilis. There is no alternative but notification and compulsion for this type of woman, and that mentioned in group one.



TABLE VII.  
 Defaulters.

Year.	Number of Persons Attending in each year.		Dangerous Defaulters.				Other Defaulters.				Total Defaulters.		
			Male.		Female.		Male.		Female.				
	Male.	Female.	Total.	No.	Percent- age.	No.	Percent- age.	No.	Percent- age.	No.	Percent- age.		
1931 .....	2,689	697	3,368	100	3·72	34	4·88	216	8·03	72	10·33	422	12·53
1932 .....	2,771	725	3,496	104	3·75	28	3·86	193	6·97	83	11·45	408	11·67
1933 .....	2,824	735	3,559	92	3·26	54	7·34	224	7·93	81	11·02	451	12·67
1934 .....	2,703	794	3,497	84	3·11	64	8·06	221	8·17	82	10·33	451	12·89
1935 .....	2,555	804	3,559	61	2·39	58	7·22	186	7·28	75	9·32	380	11·31
1936 .....	2,475	787	3,262	57	2·30	51	6·48	167	6·75	98	12·46	373	11·43
1937 .....	2,576	737	3,313	66	2·56	47	6·37	182	7·06	77	10·45	372	11·23
1938 .....	2,605	696	3,301	52	1·99	44	6·32	208	7·98	61	8·74	365	11·08
Total ....	21,198	5,957	27,155	616	2·91	373	6·26	1,597	7·53	636	10·67	3,222	11·86

Syphilis.

There were 181 new cases of Syphilis who attended for the first time and had not been diagnosed at other Treatment Centres. This is the lowest number since the opening of the Clinic in 1928. Nearly half of this number were cases of early Syphilis. It is important to observe that Sero-negative Primary Syphilis heads the list in the acute stage of the male sex, and that there were only 9 patients of the female sex in the acute stage of the disease. There were actually 87 new patients in the acute stage of Syphilis, and 94 patients in the chronic stage of the disease.

TABLE VIII.  
(Degrees of Syphilis Cases, 1938).

Stage.	Degree.	Male.	Female.	Total.
ACUTE	I. Sero-neg. primary.....	31	1	32
	II. Sero-pos. primary.....	26	2	28
	III. Early secondary .....	12	—	12
	IV. Late secondary.....	9	6	15
	Total Acute Stage.....	78	9	87
CHRONIC	V. Endosyphilis .....	18	14	32
	VI. Tertiary and Visceral.....	15	7	22
	VII. Neurosyphilis.....	18	11	29
	VIII. Congenital syphilis.....	4	7	11
	Total Chronic Stage.....	55	39	94
GRAND TOTAL.....		133	48	181

This Table embraces Item 3 of V.D. (R.) for 1938.

Congenital Syphilis.

In Table IX the cases of Congenital Syphilis are classified according to age and sex. During the past eight years there were 208 patients suffering from Congenital Syphilis. The highest number was recorded in 1931, and the lowest in the year under review.

TABLE IX.  
Cases of Congenital Syphilis from Item 3 of Forms V.D. (R) Classified in Age and Sex Groups.

Year.	Under 1 year.		1 and under 5 years.		5 and under 15 years.		15 years and over.		Total. M. F.		Grand Total.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1931.....	2	3	1	2	15	7	9	6	27	18	45
1932.....	—	2	1	5	9	13	2	3	12	23	35
1933.....	2	1	1	—	5	9	3	6	11	16	27
1934.....	3	—	1	1	3	4	6	—	13	5	18
1935.....	4	2	2	4	5	8	4	11	15	25	40
1936.....	3	1	—	—	3	2	6	4	12	7	19
1937.....	3	2	1	—	—	3	3	1	7	6	13
1938.....	1	1	—	—	1	—	2	6	4	7	11
Total.....	18	12	7	12	41	46	35	37	101	107	208

### Treatment of Syphilis.

The two potent remedies, Neoarsphenaminæ and Bismuth, are given alternately. There are no rest periods, and these preparations are given continuously until the efficiency index of 70 is obtained. This has been the method in use during the past eight years, and the results obtained in the acute stages of Syphilis are good.

Patients suffering from the early stages of Syphilis, who fail to reach the efficiency index of 70, usually fall into one of the following categories :—

1. Those developing intolerance to Neoarsphenamine preparations.
2. Cases developing Jaundice of Dermatitis.
3. Irregular attenders.
4. Defaulters.

The remedial agents in routine use for the treatment of acute Syphilis are Stabilarosan, Novarsenobillon and Bivatol. The agents used for treatment of the chronic stages of the disease are Neosilversalvarsan, Stabilarosan, Tryparsamide, Orarson and Chlorostab. These remedies are prescribed according to the stage of the disease and the condition of the patient.

In addition to the above preparations, Collosol Iodine 0·8 per cent. and Mercury Sulphide (Crooks) are used as adjuvants. Collosol Iodine is given intravenously in 5 c.c. doses, twice weekly for four weeks. Collosol Mercury Sulphide is given intramuscularly in 5 c.c. doses, twice weekly for 3 to 6 weeks. It is also used in acute cases of Syphilis which have developed Neoarsphenaminæ Dermatitis. In addition, it is a useful alternative to Neoarsphenaminæ and Bismuth Therapy in chronic cases of Syphilis.

Malaria Therapy was given to eight patients in which the Central Nervous System was affected by Syphilis. All these were treated as in-patients, each being allowed 10 attacks of Malaria. Of these eight patients, six improved clinically and two showed no improvement.

Vitamin B<sub>2</sub> (Betaxan) has been tried in cases of Tabes Dorsalis with severe neuritic pains. One c.c. is given subcutaneously twice weekly for 4 to 6 weeks. Patients report that this treatment eased the pains.

### Gonorrhoea.

In the year 1938 there were 691 fresh cases of Gonorrhœa, 548 male and 143 female patients. Compared with 1937, there is an increase of 55 male and 14 female cases. The average number of male and female patients suffering from Gonorrhœa in both stages—fresh and old infections—during the past eleven years, has been 694 per annum. It will be observed from Table II that there has not been any improvement in the incidence of Gonorrhœa in the community served by the Clinic. There are many reasons for this state of affairs. The first, and probably the most important one, is that at present there is no specific drug for the treatment of Gonorrhœa, as there is for Syphilis. The second reason is that many women suffering from Gonorrhœa in the latent stages feel well and refuse examination, or rely on one negative smear examination. These women live in a state of false security until Salpingitis or Arthritis appear on the scene.

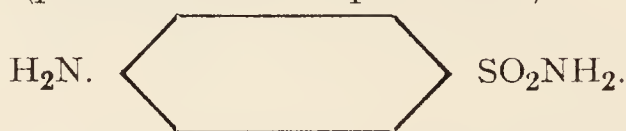


### Treatment of Gonorrhoea.

In spite of the recent introduction of Sulphanilamide and allied compounds in the treatment of Gonorrhoea in the male sex, the routine treatment referred to in the Annual Report for the year 1937 is not altered. Treatment with sulphanilamides is still in the experimental stage, and reports as to the value of Chemotherapy in Gonorrhoea are conflicting. In 1936-37 it was Prontosil Album—that was considered a “New Treatment” for Gonorrhoea. In 1937 it was Uleron, and now it is M. & B. 693. One cannot be too careful in endeavouring to assess the value of any treatment where gonococcal infections are concerned. This is even more true in the case of gonococcal infections in women and children. There is still ample room for improvement in the therapy of Gonorrhoea, and this can only be achieved by patient and well-controlled experimental trial. Therefore, careful and patient investigation of cases has been carried out at the Salford Municipal Clinic since 1936, and this is still going on. The three preparations, Sulphanilamide, Uleron and M. & B. 693, are still under investigation. A preliminary report of these investigations was published in the British Medical Journal, February 18th, 1939, Vol. 1, p. 317. Two hundred cases were investigated and observed for a minimum period of three months after treatment, during which time adequate tests were carried out. A summary of the results achieved with these three preparations was published in the same paper.

#### SULPHANILAMIDE.

(p-aminobenzenesulphonamide)



This preparation is a white crystalline powder with a bitter taste. It is sparingly soluble in cold water, but dissolves easily in Acetone or Hydrochloric Acid. It is marketed in tablets each containing 0.5 gramme of the substance, and goes under various names such as Streptocide, Colsulanyde, Sulphonamide-P, Prontosil Album, Proceptine, etc.

Sulphanilamide, when given by the mouth in doses of 0.05 to 0.20 grammes per kilogramme of body weight, is rapidly absorbed from the gastro-intestinal tract, and the absorption is usually complete in four hours. Subcutaneous or intravenous injection does not seem to lead to a higher concentration in the blood than does oral administration. The rate of elimination from the blood is not altered by the method of administration.

Sulphanilamide is excreted chiefly in the urine, hence its wide use in genito-urinary affections.

The main preparations of Sulphanilamide used at the Salford Treatment Centre are Prontosil Album (Bayer), Streptocide (Webb) and Sulphanilamide (Boots).

Prontosil Album was given in gramme doses three times a day for 21 days—in addition to daily irrigation with Potass. Permang. for the same period. Particulars of each case are tabulated in Table X. It will be seen that toxic reactions occurred in 34 per cent. of these cases. The main toxic symptoms are headache, dizziness, nausea and blueness of the lips. There were only three cases with gonococcal complications. This is a great improvement, as in the control cases gonococcal complications occurred in 16 per cent. of cases. The cure rate, however, is under 50 per cent.

TABLE X.  
PRONTOSIL ALBUM. MALE PATIENTS.

Serial No.	Patient's No.	A—Anterior. P—Posterior. G.C. Urethritis.	Dose of drug.	Total amount given.	Number of days with + G.C. smears.	Toxic complications.	Complications due to Gonococci.	Result.		Remarks.
								Cured.	Relapsed.	
1	A.9243	P.	3 grammes daily.	63 grammes.	22 days.	Nil.	Nil.	—	Relapsed.	Had treatment for another 3 weeks then passed tests of cure. Post Urethritis became anterior in 2 days of treatment. First attack of G.C. infection.
2	A.9246	A.	1½ grammes daily.	28½ grammes.	15 days.	Slight Head-ache.	Nil.	Cured.	—	Had G.C. infection in 1931.
3	A.9247	P.	1½ grammes daily.	31½ grammes.	50 days.	Nil.	Nil.	—	Relapsed.	Had Gonorrhœa in 1931. Had another 9 weeks of routine treatment and was cured eventually.
4	A.9267	A.	1½ grammes daily.	22½ grammes.	8 days.	Nil.	Nil.	Cured.	—	Had Gonorrhœa in 1934.
5	A.9274	P.	1½ grammes daily.	31½ grammes.	40 days.	Nil.	Nil.	—	Relapsed.	Put on routine in the 4th week. Passed tests of cure after 6 additional weeks of treatment.
6	A.9283	P.	1½ grammes daily.	31½ grammes.	54 days.	Nil.	Nil.	—	Relapsed.	Took three months on routine treatment to be cured.
7	A.9284	P.	3 grammes daily.	52½ grammes.	12 days.	Nil.	Nil.	Cured.	—	Posterior Urethritis cleared within 2 days of commencing treatment.
8	A.9365	A.	3 grammes daily.	63 grammes.	14 days.	Nil.	Nil.	Cured.	—	
9	A.9404	P.	3 grammes daily.	51 grammes.	28 days.	Nil.	Nil.	—	Relapsed.	Posterior Urethritis cleared within 2 days of treatment. Had additional 3 months' routine treatment before he was cured.

TABLE X—continued.

Serial No.	Patient's No.	A—Anterior. P—Posterior. G.C. Urethritis.	Dose of drug.	Total amount given.	Number of days with +G.C. smears.	Toxic complications.	Complications due to Gonococci.	Result.		Remarks.
								Cured.	Relapsed.	
10	A.9423	A.	3 grammes daily.	41 grammes.	1 day.	Urticaria. Skin sensitive to Sun rays. Has had summer dermatitis in the past.	Nil.	Cured.	—	
11	A.9436	A.	3 grammes daily.	28½ grammes.	3 days.	Slight cyanosis of the lips.	Nil.	Cured.	—	
12	A.9466	A.	3 grammes daily.	45½ grammes.	32 days.	Nil.	Nil	—	Relapsed.	Relapsed on routine treatment also. Ceased to attend eventually.
13	A.9469	P.	1½ grammes daily.	30 grammes.	30 days.	Nil.	Nil.	—	Relapsed.	Defaulted on routine treatment.
14	A.9496	A.	3 grammes daily.	60 grammes.	30 days.	Nil.	Nil.	—	Relapsed.	Eventually cured on routine treatment.
15	A.9501	A.	3 grammes daily.	60 grammes.	1 day.	Nil.	Nil.	Cured.	—	
16	A.9509	A.	3 grammes daily.	30 grammes.	13 days.	Gastric upset. Vomiting.	Nil.	Cured.	—	
17	A.9545	P.	3 gms. daily for 3 days. Reduce to 1½ gms. daily.	34½ grammes.	2 days.	Dizziness 4th day of treatment after 9 gms. Dosage reduced.	Nil.	Cured.	—	Posterior Urethritis cleared in 2 days.
18	A.9549	P.	3 grammes daily.	63 grammes.	8 days.	Nil.	Nil.	Cured.	—	
19	A.9550	A.	3 grammes daily for 10 days.	30 grammes.	1 day.	Measles rash.	Nil.	Cured.	—	Treated for 10 days; developed a skin rash, not seen at the Clinic. This was diagnosed Measles by private Doctor.



TABLE X—continued.

Serial No.	Patient's No.	A—Anterior. P—Posterior. G.C. Urethritis.	Dose of drug.	Total amount given.	Number of days with +G.C. smears.	Toxic complications.	Complications due to Gonococci.	Result.		Remarks.
								Cured.	Relapsed.	
20	A.9551	A.	3 grammes daily.	42 grammes.	24 days.	Nil.	Nil.	—	Relapsed.	Cured on routine treatment, took 9 weeks.
21	A.9577	A.	3 grammes daily.	51 grammes.	27 days.	Nil.	Nil.	—	Relapsed.	Cured on routine treatment.
22	A.9581	P.	3 grammes daily.	57 grammes.	2 days.	Nil.	Nil.	Cured.	—	
23	A.9585	P.	3 grammes daily.	60 grammes.	2 days.	Nil.	Nil.	Cured.	—	Posterior Urethritis cleared on 3rd day of treatment.
24	A.9592	A.	3 grammes daily.	60 grammes.	25 days.	Nil.	Nil.	—	Relapsed.	Had 11 weeks' additional routine treatment before final cure.
25	A.9594	P.	3 grammes daily.	60 grammes.	91 days.	Nil.	Nil.	—	Relapsed.	Had 19 weeks' additional routine treatment before final cure.
26	A.9596	P.	3 grammes daily.	60 grammes.	9 days.	Nil.	Nil.	Cured.	—	Posterior Urethritis cleared in 2 days of treatment.
27	A.9598	P.	3 gms. daily, later reduced to 1½ gms. daily.	42 grammes.	15 days.	Slight Cyanosis.	Nil.	Cured.	—	
28	A.9615	P.	3 grammes daily.	57 grammes.	2 days.	Nil.	Nil.	Cured.	—	
29	A.9624	P.	3 grammes daily.	63 grammes.	77 days.	Nil.	Nil.	—	Relapsed.	Cured after 5 months' routine treatment.
30	A.9629	A.	3 grammes daily.	66 grammes.	24 days.	Nil.	Nil.	—	Relapsed.	
31	A.9641	P.	3 grammes daily.	66 grammes.	86 days.	Nil.	Nil.	—	Relapsed.	
32	A.9642	P.	3 grammes daily.	40½ grammes.	30 days.	Nil.	Nil.	—	Relapsed.	

TABLE X—continued.

Serial No.	Patient's No.	A—Anterior. P—Posterior. G.C. Urethritis.	Dose of drug.	Total amount given.	Number of days with + G.C. smears.	Toxic complications.	Complications due to Gonococci.	Result.		Remarks.
								Cured.	Relapsed.	
33	A.9645	P.	3 grammes daily.	54 grammes.	8 days.	Nil.	Nil.	Cured.	—	
34	A.9650	P.	Do.	63 grammes.	4 days.	Nil.	Nil.	Cured.	—	
35	A.9657	A.	Do.	66 grammes.	26 days.	Nil.	Nil.	—	Relapsed.	
36	A.9667	A.	Do.	45 grammes.	24 days.	Nil.	Nil.	—	Relapsed.	
37	A.9669	P.	Do.	57 grammes.	27 days.	Nil.	Nil.	—	Relapsed.	
38	A.9677	P.	Do.	63 grammes.	50 days.	Nil.	Nil.	—	Relapsed.	
39	A.9680	P.	Do.	60 grammes.	3 days.	Nil.	Nil.	—	Relapsed.	
40	A.9696	P.	Do.	36 grammes.	29 days.	Nil.	Nil.	—	Relapsed.	
41	A.9898	P.	Do.	6 grammes.	28 days.	Vomiting, tachicardia and dizziness.	Nil.	—	—	Could not tolerate Sulphanilamide. Cured on ordinary routine.
42	A.9699	P.	Do.	43½ grammes.	30 days.	Nil.	Nil.	—	Relapsed.	
43	A.9707	A.	Do.	60 grammes.	50 days.	Nil.	Nil.	—	Relapsed.	
44	A.9711	A.	Do.	66 grammes.	1 day.	Nil.	Nil.	Cured.	—	
45	A.9723	A.	Do.	60 grammes.	1 day.	Nil.	Nil.	Cured.	—	
46	A.9727	P.	Do.	51 grammes.	35 days.	Anorrexia, vomiting, slight Cyanosis.	Tysonitis, G.C. +	—	Relapsed.	

TABLE X—continued.

Serial No.	Patient's No.	A—Anterior. P—Posterior. G.C. Urethritis.	Dose of drug.	Total amount given.	Number of days with + G.C. smears.	Toxic complications.	Complications due to Gonococci.	Result.		Remarks.
								Cured.	Relapsed.	
47	A.9728	A.	3 grammes daily.	33 grammes.	28 days.	Influenza. Jaundice of Catarrhal type.	Nil.	—	Relapsed.	
48	A.9730	A.	Do.	63 grammes.	56 days.	Nil.	Nil.	—	Relapsed.	
49	A.9734	A.	Do.	57 grammes.	12 days.	Nil.	Nil.	Cured.	—	
50	A.9735	A.	Do.	60 grammes.	24 days.	Nil.	Nil.	—	Relapsed.	
51	A.9739	P.	Do.	7½ grammes.	—	Pains all over the body, erythema of the face, no Cyanosis.	—	—	—	Taken off Prontosil; defaulted on routine treatment; follow-up letter sent without effect.
52	A.9740	A.	Do.	60 grammes.	42 days.	Nil.	Tysonitis.	—	Relapsed.	Tyson's gland cured by injections of AgNO <sub>3</sub> -2%. Chemo-therapy had no effect on Tysonitis.
53	A.9756	A.	Do.	60 grammes.	2 days.	Nil.	Nil.	Cured.	—	
54	A.9757	P.	Do.	33 grammes.	8 days.	Cyanosis. Influenzal attack; pains in the joints.	—	—	—	Taken off Prontosil treatment and put on routine; no complications during routine therapy. Passed all tests for cure.
55	A.9763	P.	Do.	66 grammes.	112 days.	Nil.	Nil.	—	Relapsed.	Cured after 6 months' routine treatment. No previous history of Gonorrhœa.
56	A.9774	A.	Do.	63 grammes.	70 days.	Nil.	Nil.	—	Relapsed.	Cured on routine treatment; no complications during routine therapy.



TABLE X—continued.

Serial No.	Patient's No.	A—Anterior. P—Posterior. G.C. Urethritis.	Dose of drug.	Total amount given.	Number of days with + G.C. smears.	Toxic complications.	Complications due to Gonococci.	Result.		Remarks.
								Cured.	Relapsed.	
57	A.9781	A.	3 grammes daily.	60 grammes.	29 days.	Nil.	Nil.	—	Relapsed.	Cured on routine therapy.
58	A.9809	A.	Do.	27 grammes.	1 day.	Severe dyspnoea. No Cyanosis.	Nil.	—	—	Taken off Prontosil therapy; eventually cured on routine therapy.
59	A.9813	P.	Do.	63 grammes.	1 day.	Nil.	Nil.	Cured.	—	
60	A.9815	A.	Do.	60 grammes.	31 days.	Nil.	Nil.	—	Relapsed.	Cured on routine; no complications. Took 21 weeks of treatment. Had G.C. infection in 1929.
61	A.9834	A.	Do.	63 grammes.	77 days.	Nausea.	Nil.	—	Relapsed.	
62	A.9847	A.	Do.	30 grammes.	8 days.	Nausea, severe diarrhoea.	Nil.	—	—	Taken off Prontosil. Cured on routine therapy.
63	A.9850	A.	Do.	33 grammes.	42 days.	Nil.	L. Epidymitis.	—	—	Attended regularly for 11 days during which time had 33 gms. Prontosil, then absent for 3 weeks. Returned in 5th week with L. Epidymitis. Cured on routine treatment.
64	A.9853	P.	Do.	57 grammes.	5 days.	Nil.	Nil.	Cured.	—	
65	A.9857	A.	Do.	60 grammes.	4 days.	Nil.	Nil.	Cured.	—	
66	A.9870	A.	Do.	36 grammes.	7 days.	Slight Cyanosis of the lips.	Nil.	Cured.	—	
67	A.9877	P.	Do.	22½ grammes.	8 days.	Slight Cyanosis of the lips.	Nil.	—	—	Defaulted after 8 days' treatment.

TABLE X—continued.

Serial No.	Patient's Do.	A—Anterior. P—Posterior. G.C. Urethritis.	Dose of drug.	Total amount given.	Number of days with +G.C. smears.	Toxic complications.	Complications due to Gonococci.	Result.		Remarks.
								Cured.	Relapsed.	
68	A.9883	A.	3 grammes daily.	31 grammes.	40 days.	Seborrhœic subject. Developed Urticaria of severe type 12th day of therapy.	—	—	—	Taken off. Cured by routine measures in 9 weeks.
69	A.9885	A.	Do.	63 grammes.	35 days.	Herpes Labialis.	Nil.	—	Relapsed.	Cured on routine.
70	A.9887	P.	Do.	45 grammes.	8 days.	Flatulence. Bus driver.	Nil.	Cured.	—	
71	A.9890	A.	Do.	9 grammes.	42 days.	General mal-aise, marked dyspnœa, numbness in hands.	Nil.	—	—	Taken off. Cured by routine measures.
72	A.9898	P.	Do.	36 grammes.	4 days.	Definite Cyanosis of the face.	Nil.	—	—	Placed on routine treatment. Transferred to other Centres in 8th week of treatment.
73	A.9903	A.	Do.	66 grammes.	13 days.	Nil.	Nil.	Cured.	—	
74	A.9917	P.	Do.	60 grammes.	11 days.	Nil.	Nil.	Cured.	—	
75	A.9922	A.	Do.	48 grammes.	63 days.	Pins and needles in the hands.	Nil.	—	Relapsed.	Cured on routine—10 weeks' therapy.
76	A.9930	P.	Do.	27 grammes.	30 days.	Headache, Temp. 101 F. Cyanosis, pains in limbs.	Nil.	—	—	Taken off. Treated by routine measures for 7 weeks. Passed tests for cure.

TABLE X—continued.

Serial No.	Patient's No.	A—Anterior. P—Posterior. G.C. Urethritis.	Dose of drug.	Total amount given.	Number of days with + G.C. smears.	Toxic complications.	Complications due to Gonococci.	Result.		Remarks.
								Cured.	Relapsed.	
77	A.9934	A.	3 grammes daily.	12 grammes.	5 days.	Malaise, drowsiness, numbness in the hands.	Nil.	—	—	Taken off. Cured on routine treatment.
78	A.9939	P.	Do.	48 grammes.	4 days.	Herpes Labialis.	Nil.	Cured.	—	
79	A.9946	P.	Do.	63 grammes.	2 days.	Nil.	Nil.	Cured.	—	
80	A.9958	P.	Do.	58 grammes.	28 days.	Nil.	Nil.	—	Relapsed.	Ceased to attend during routine therapy.
81	A.9969	P.	Do.	58 grammes.	11 days.	Nil.	Nil.	Cured.	—	
82	A.9972	P.	Do.	60 grammes.	2 days.	Nil.	Nil.	Cured.	—	
83	A.9999	A.	Do.	63 grammes.	35 days.	Nil.	Nil.	—	Relapsed.	
84	B.7	P.	Do.	57 grammes.	29 days.	Nil.	Nil.	—	Relapsed.	Ceased to attend during routine therapy.
85	B.14	P.	Do.	66 grammes.	1 day.	Nil	Nil.	Cured.	—	
86	B.28	A.	Do.	54 grammes.	26 days.	Nil.	Nil.	—	Relapsed.	
87	B.46	P.	Do.	6 grammes.	—	Dizziness. Tachycardia.	Nil.	—	—	Taken off. Cured by routine treatment.
88	B.48	P.	Do.	57 grammes.	30 days.	Nil.	Nil.	—	Relapsed.	Ceased to attend during routine treatment.
89	B.55	A.	Do.	57 grammes.	2 days.	Malaise.	Nil.	Cured.	—	
90	B.63	A.	Do.	57 grammes.	8 days.	Nil.	Nil.	Cured.	—	



TABLE X—continued.

Serial No.	Patient's No.	A—Anterior. P—Posterior. G.C. Urethritis.	Dose of drug.	Total amount given.	Number of days with +G.C. smears.	Toxic complications.	Complications due to Gonococci.	Result.		Remarks.
								Cured.	Relapsed.	
91	B.64	P.	3 grammes daily.	60 grammes.	2 days.	Pains in the loin and slight headache.	Nil.	Cured.	—	
92	B.70	A.	3 gms. daily for 3 days. Reduce to 1½ gms. daily.	24 grammes.	—	Nausea, dizziness and general malaise.	Nil.	—	—	Taken off Prontosil. Cured by routine measures in 9 weeks.
93	B.87	P.	3 grammes daily.	45 grammes.	1 day.	Slight Cyanosis.	Nil.	Cured.	—	
94	B.117	P.	Do.	61 grammes.	28 days.	Severe headaches.	Nil.	—	Relapsed.	Cured on routine therapy.
95	B.113	P.	Do.	21 grammes.	30 days.	Marked Cyanosis of the face, headache and giddiness.	Nil.	—	—	Taken off Prontosil. Cured by routine therapy in 3 months.
96	B.110	P.	Do.	63 grammes.	238 days.	Nil.	Nil.	—	Relapsed.	Has relapsed 3 times on other therapy. Wife irregular attender. Coitis not admitted by patient or his wife. Still on treatment.
97	A.9663	A.	Do.	9 grammes.	—	Dyspnoea, dizziness.	Nil.	—	—	Taken off. Cured by other measures.
98	A.9785	P.	Do.	15 grammes.	1 day.	—	Nil.	—	—	Transferred to other Centres.
99	A.9807	P.	Do.	42 grammes.	14 days.	Nil.	Nil.	—	—	Transferred to other Centres.
100	A.9822	P.	Do. "	33 grammes.	2 days.	Nil.	Nil.	Cured.	—	Ceased to attend during observation of cure.

## ULERON.

(p-Aminobenzenesulphonyl-p'-aminobenzenesulphondimethylamide)



This is a colourless substance with a slightly bitter taste. It is practically insoluble in water, but soluble in Alkalies and Acetone. It is known abroad by the names Disseptal A or D.B.90.

Some Continental observers believe that Uleron is superior to Sulphanilamide in the treatment of staphylococcal and gonococcal infections. Felke recommends that Uleron treatment should be commenced 3 weeks after the onset of the disease. The tissues of the body must become resistant to infection before Uleron can produce the best results (Delayed Chemotherapy).

Fifty male patients were investigated in the Salford Municipal Clinic according to this method. They were observed for three months after completion of treatment, during which time adequate tests for cure were carried out. The results claimed have not been confirmed. Only 56 per cent. of these cases passed the tests, and the rate of gonococcal complications was higher in this series than in the series treated by routine methods. The essential particulars of the cases investigated are shown in Table XI. A few male patients treated with Uleron in the first week of the disease responded in the same manner as those treated with Sulphanilamide.

It is now claimed by some Continental observers that between 60 and 70 per cent. are cured after the first stoss of treatment with Uleron given on the tenth day of the disease, and 90 per cent. of cases after the third stoss of Uleron. Accordingly, the first stoss should be given on the 10th, 11th, 12th and 13th days of disease (3 grammes daily for four days—total per stoss 12 grammes), the second stoss on the 20th, 21st, 22nd and 23rd days, and the third stoss on the 29th, 30th, 31st and 32nd days. Urethral irrigations with Potass. Permang. (1 in 10,000) should be given as soon as the patient presents himself, and continued throughout Uleron treatment.

Fifty male patients are undergoing investigation according to this method, and the results will be published later.

TABLE XI.  
ULERON.  
MALE PATIENTS.

Serial No.	Patient's No.	A—Anterior. P—Posterior. G.C. Urethritis.	Dose of drug.	Total amount given.	Number of days with +G.C. smears.	Toxic complications.	Complications due to Gonococci.	Result.		Remarks.
								Cured.	Relapsed.	
1	B.182	P.	2 Tablets t.d.s.	24 grammes.	14 days.	Nil.	Nil.	Cured.	—	G.C.F.T. persistently positive.
2	B.254	A.	Do.	24 grammes.	147 days.	Nil.	Nil.	—	Relapsed.	Still on treatment—8th month.
3	B.258	A.	Do.	15 grammes.	20 days.	General mal-aise. Temp. 102 F. Pains in the joints.	Periurethral abscess on 11th day.	Cured.	—	Periurethral abscess disappeared under the influence of Uleron.
4	B.264	P.	Do.	18 grammes.	35 days.	Weakness in the legs. Tachycardia.	R. Epididymitis.	—	Relapsed.	Epididymitis commenced on 13th day. Uleron produced no effect.
5	B.269	A.	Do.	24 grammes.	38 days.	Nil.	R. Epididymitis.	—	Relapsed.	Cured by routine measures.
6	B.270	A.	Do.	24 grammes.	17 days.	Nil.	Nil.	Cured.	—	
7	B.273	A.	Do.	24 grammes.	15 days.	Nil.	Nil.	Cured.	—	
8	B.274	P.	Do.	24 grammes.	3 days.	Nil.	Nil.	Cured.	—	
9	B.276	P.	Do.	24 grammes.	1 day.	Nil.	Nil.	Cured.	—	
10	B.282	A.	Do.	24 grammes.	6 days.	Nil.	Nil.	Cured.	—	
11	B.290	P.	Do.	24 grammes.	10 days.	Nil.	Nil.	Cured.	—	
12	B.295	P.	Do.	24 grammes.	32 days.	Nil.	R. Epididymitis on the 15th day.	—	Relapsed.	No beneficial effect on Epididymitis.
13	B.304	P.	Do.	24 grammes.	32 days.	Nil.	Nil.	—	Relapsed.	



TABLE XI—continued.

Serial No.	Patient's No.	A—Anterior. P—Posterior. G.C. Urethritis.	Dose of drug.	Total amount given.	Number of days with +G.C. smears.	Toxic complications.	Complications due to Gonococci.	Result.		Remarks.
								Cured.	Relapsed.	
14	B.309	P.	2 Tablets t.d.s.	24 grammes.	15 days.	Nil.	Nil.	Cured.	—	
15	B.310	P.	Do.	24 grammes.	16 days.	Nil.	Nil.	Cured.	—	
16	B.313	A.	Do.	24 grammes.	38 days.	Erythematous rash on the arms.	Periurethral abscess.	—	Relapsed.	
17	B.333	A.	Do.	24 grammes.	26 days.	Nil.	Nil.	Cured?	—	Ceased to attend during tests for cure.
18	B.337	P.	Do.	21 grammes.	91 days.	Nil.	Hæmaturia.	—	Relapsed.	
19	B.338	P.	Do.	24 grammes.	17 days.	Nil.	Nil.	Cured.	—	
20	B.342	P.	Do.	24 grammes.	37 days.	Nil.	Nil.	—	Relapsed.	
21	B.343	P.	Do.	24 grammes.	18 days.	Nil.	Nil.	Cured.	—	
22	B.355	P.	Do.	24 grammes.	23 days.	Nil.	Nil.	Cured?	—	Ceased to attend during tests for cure.
23	B.361	A.	Do.	24 grammes.	45 days.	Nil.	Nil.	—	Relapsed.	
24	B.366	P.	Do.	24 grammes.	4 days.	Nil.	Nil.	Cured.	—	
25	B.367	P.	Do.	24 grammes.	24 days.	Nil.	Oedema of the prepuce.	Cured.	—	
26	B.372	P.	Do.	12 grammes.	16 days.	Nil.	Nil.	Cured?	—	Ceased to attend during observation for cure.
27	B.373	P.	Do.	24 grammes.	15 days.	Nil.	Nil.	Cured.	—	G.C.F.T. +

TABLE XI—continued.

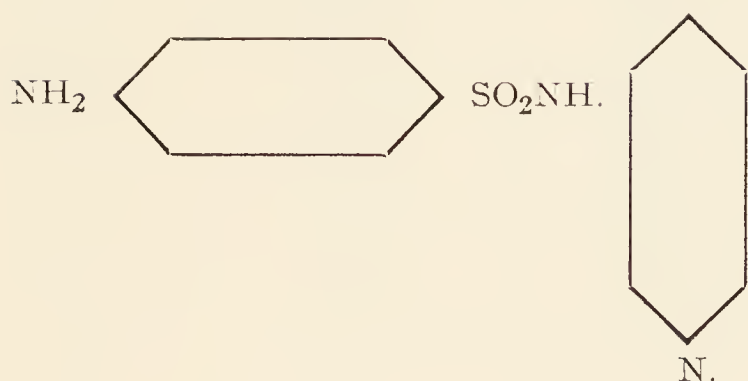
Serial No.	Patient's No.	A—Anterior. P—Posterior. G.C. Urethritis.	Dose of drug.	Total amount given.	Number of days with + G.C. smears.	Toxic complications.	Complications due to Gonococci.	Result.		Remarks.
								Cured.	Relapsed.	
28	B.393	P.	2 Tablets t.d.s.	24 grammes.	38 days.	Nil.	Periurethra abscess.	—	Relapsed.	
29	B.399	A.	Do.	24 grammes.	16 days.	Nil.	Nil.	Cured.	—	
30	B.401	P.	Do.	24 grammes.	15 days.	Nil.	Nil.	Cured.	—	
31	B.411	P.	Do.	24 grammes.	7 days.	Nil.	Nil.	Cured?	—	Ceased to attend during observation for cure.
32	B.412	A.	Do.	24 grammes.	17 days	Rigors, Anor-exia. Temp. 104 F. Slight Cyanosis.	Nil.	Cured.	—	
33	B.428	A.	Do.	24 grammes.	15 days.	Nil.	Nil.	Cured.	—	
34	B.436	A.	Do.	24 grammes.	12 days.	Nil.	Nil.	Cured.	—	
35	B.446	A.	Do.	24 grammes.	16 days.	Nil.	Nil.	Cured.	—	
36	B.447	P.	Do.	24 grammes.	2 days.	Nil.	Nil.	Cured.	—	
37	B.456	P.	Do.	24 grammes.	17 days.	Nil.	Nil.	Cured.	—	
38	B.460	A.	Do.	24 grammes.	14 days.	Nil.	Nil.	Cured.	—	
39	B.475	P.	Do.	24 grammes.	33 days.	Nil.	Developed Epididymitis during administration of Uleron.	—	Relapsed.	Epididymitis resolved in 3 weeks.
40	B.480	A.	Do.	15 grammes.	15 days.	Nil.	Nil.	Cured?	—	Ceased to attend during observation for cure.

TABLE XI—continued.

Serial No.	Patient's No.	A—Anterior. P.—Posterior. G.C. Urethritis.	Dose of drug.	Total amount given.	Number of days with +G.C. smears.	Toxic complications.	Complications due to Gonococci.	Result.		Remarks.
								Cured.	Relapsed.	
41	B.496	P.	2 Tablets t.d.s.	24 grammes.	91 days.	Nil.	Nil.	—	Relapsed.	Took 21 weeks to get rid of infection.
42	B.498	A.	Do.	18 grammes.	16 days.	Nil.	Nil.	Cured.	—	
43	B.500	A.	Do.	24 grammes.	16 days.	Nil.	Nil.	Cured.	—	
44	B.503	A.	Do.	24 grammes.	12 days.	Nil.	Nil.	Cured.	—	
45	B.513	P.	Do.	24 grammes.	16 days.	Nil.	Nil.	Cured.	—	
46	B.521	P.	Do.	24 grammes.	77 days.	Nil.	Nil.	—	Relapsed.	Cured by routine measures.
47	B.537	P.	Do.	18 grammes.	49 days.	Nil.	Nil.	—	Relapsed.	Ceased to attend after relapsing.
48	B.542	P.	Do.	15 grammes.	34 days.	Nil.	Nil.	—	Relapsed.	
49	B.544	P.	Do.	18 grammes.	3 days.	Nil.	L. Epididymitis. Dysurea. Hæmaturia.	Cured?	—	Ceased to attend; hæmaturia and epididymitis developed 2 days before Uleron was given.
50	B.472	P.	Do.	24 grammes.	42 days.	Nil.	Nil.	—	Relapsed.	



M. & B. 693.



2-(p-Aminobenzenesulphonamide)-pyridine.

This compound is a white, crystalline, tasteless substance. It differs from Sulphanilamide in that one hydrogen of the SO<sub>2</sub>NH<sub>2</sub> group is replaced by a basic pyridine group. It was found to be very active in pneumococcal infections in mice and human beings. A number of observers have published results achieved by this drug in the treatment of gonococcal infections.

A small group of 50 patients were treated with this drug for three weeks and then observed for a period of three months during the year 1938. 86 per cent. of cases were cured in this time ; there were no gonococcal complications, and only four cases showed mild signs of intolerance. The dosage used was 2 grammes daily for 21 days.

At present a similar group of fifty male patients is being investigated ; using the same dosage of M. & B. 693, but the period of treatment is shortened to fourteen days. In addition to irrigations of Potass. Permang., patients are given 10 c.c. of Soluseptasine three times weekly. These patients have completed their therapy and are now undergoing tests for cure.

TABLE XII.  
MALE PATIENTS.

Serial No.	Patient's No.	A—Anterior. P—Posterior. G.C. Urethritis.	Dose of drug.	Total amount given.	Number of days with + G.C. smears.	Toxic complications.	Complications due to Gonococci.	Result.		Remarks.
								Cured.	Relapsed.	
1	B.773	P.	1 Tablet 4 times daily.	42 grammes.	1 day.	Nil.	Nil.	Cured.	—	
2	B.778	P.	Do.	42 grammes.	8 days.	Nil.	Nil.	Cured?	—	Ceased to attend when on tests for cure.
3	B.789	P.	Do.	42 grammes.	1 day.	Nil.	Nil.	—	Relapsed.	Cured on routine treatment. No gonorrhœal complications.
4	B.807	A.	Do.	42 grammes.	3 days.	Nil.	Nil.	Cured.	—	
5	B.809	A.	Do.	21 grammes.	3 days.	Headaches. Slight Cyanosis.	Nil.	Cured.	—	
6	B.818	A.	Do.	42 grammes.	7 days.	Nil.	Nil.	Cured.	—	
7	B.820	A.	Do.	42 grammes.	2 days.	Nil.	Nil.	Cured.	—	
8	B.823	A.	Do.	42 grammes.	2 days.	Nil.	Nil.	Cured.	—	
9	B.843	A.	Do.	42 grammes.	2 days.	Nil.	Nil.	Cured.	—	
10	B.844	P.	Do.	42 grammes.	28 days.	Nil.	Nil.	—	Relapsed.	Cured by routine measures. No extension of gonorrhœa.
11	B.849	P.	Do.	42 grammes.	5 days.	Nil.	Nil.	Cured.	—	
12	B.853	A.	Do.	40 grammes.	1 day.	Nil.	Nil.	Cured.	—	
13	B.855	P.	Do.	42 grammes.	3 days.	Nil.	Nil.	Cured.	—	
14	B.884	A.	Do.	42 grammes.	3 days.	Nil.	Nil.	—	Relapsed.	Cured on routine. No gonorrhœal complications.

TABLE XII—continued.

Serial No.	Patient's No.	A—Anterior. P—Posterior. G.C. Urethritis.	Dose of drug.	Total amount given.	Number of days with +G.C. smears.	Toxic complications.	Complications due to Gonococci.	Result.		Remarks.
								Cured.	Relapsed.	
15	B.885	P.	1 Tablet 4 times daily.	42 grammes.	3 days.	Nil.	Nil.	Cured.	—	
16	B.890	A.	Do.	42 grammes.	2 days.	Slight head-ache.	Nil.	Cured.	—	
17	B.892	P.	Do.	42 grammes.	2 days.	Nil.	Nil.	Cured.	—	
18	B.893	P.	Do.	42 grammes.	4 days.	Nil.	Nil.	Cured.	—	
19	B.911	P.	Do.	42 grammes.	7 days.	Slight head-ache.	Nil.	Cured.	—	
20	B.912	A.	Do.	42 grammes.	5 days.	Nil.	Nil.	—	Relapsed.	Cured by routine measures. No gonorrhœal complications.
21	B.921	P.	Do.	42 grammes.	3 days.	Nil.	Nil.	Cured.	—	
22	B.922	A.	Do.	42 grammes.	7 days.	Nil.	Nil.	Cured.	—	
23	B.931	P.	Do.	42 grammes.	5 days.	Nil.	Nil.	Cured.	—	
24	B.943	A.	Do.	42 grammes.	3 days.	Nil.	Nil.	Cured.	—	
25	B.946	P.	Do.	42 grammes.	4 days.	Nil.	Nil.	Cured.	—	
26	B.952	P.	Do.	42 grammes.	3 days.	Nil.	Nil.	Cured.	—	
27	B.964	A.	Do.	42 grammes.	1 day.	Nil.	Nil.	Cured.	—	
28	B.966	P.	Do.	42 grammes.	8 days.	Nil.	Nil.	Cured.	—	



TABLE XII—continued.

Serial No.	Patient's No.	A—Anterior. P—Posterior. G.C. Urethritis.	Dose of drug.	Total amount given.	Number of days with +G.C. smears.	Toxic complications.	Complications due to Gonococci.	Result.		Remarks.
								Cured.	Relapsed.	
29	B.971	P.	1 Tablet 4 times daily.	42 grammes.	3 days.	Nil.	Nil.	Cured.	—	
30	B.978	P.	Do.	42 grammes.	4 days.	Nil.	Nil.	Cured.	—	
31	B.979	A.	Do.	42 grammes.	3 days.	Nil.	Nil.	Cured.	—	
32	B.984	P.	Do.	42 grammes.	9 days.	Nil.	Nil.	Cured.	—	
33	B.994	P.	Do.	42 grammes.	2 days.	Nil.	Nil.	Cured.	—	
34	B.997	P.	Do.	42 grammes.	3 days.	Nil.	Nil.	Cured.	—	
35	B.999	A.	Do.	42 grammes.	1 day.	Nil.	Nil.	Cured.	—	
36	B.1015	A.	Do.	42 grammes.	1 day.	Nil.	Nil.	Cured.	—	
37	B.1016	A.	Do.	42 grammes.	3 days.	Nil.	Nil.	Cured.	—	
38	B.1017	P.	Do.	42 grammes.	3 days.	Nil.	Nil.	Cured.	—	
39	B.1018	A.	Do.	42 grammes.	3 days.	Nil.	Nil.	Cured.	—	
40	B.1019	P.	Do.	42 grammes.	29 days.	Nil.	Nil.	—	Relapsed.	
41	B.1026	P.	Do.	42 grammes.	3 days.	Nil.	Nil.	Cured.	—	
42	B.1032	P.	Do.	42 grammes.	2 days.	Nil.	Nil.	Cured.	—	

TABLE XII—continued.

Serial No.	Patient's No.	A—Anterior. P—Posterior. G.C. Urethritis.	Dose of drug.	Total amount given.	Number of days with G.C. smears.	Toxic complications.	Complications due to Gonococci.	Result.		Remarks.
								Cured.	Relapsed.	
43	B.1038	A.	1 Tablet 4 times daily.	42 grammes.	25 days.	Nil.	Nil.	—	Relapsed.	Cured by routine measures. No complications.
44	B.1046	A.	Do.	42 grammes.	8 days.	Nil.	Nil.	Cured.	—	
45	B.1069	P.	Do.	42 grammes.	1 day.	Nil.	Nil.	Cured.	—	
46	B.1074	P.	Do.	42 grammes.	3 days.	Nil.	Nil.	Cured.	—	
47	B.1078	P.	Do.	42 grammes.	1 day.	Nil.	Nil.	Cured.	—	
48	B.1084	P.	Do.	42 grammes.	1 day.	Nil.	Nil.	Cured.	—	
49	B.1085	P.	Do.	42 grammes.	6 days.	Slight head-ache.	Nil.	Cured.	—	
50	B.1096	P.	Do.	42 grammes.	2 days.	Nil.	Nil.	Cured.	—	

**Chemotherapy of Gonorrhoea in the Female Sex.**

So far very little has been said on this subject. Many women and children suffering from gonococcal infections have been treated with sulphanilamide preparations. The results achieved are not so good as in male patients. Women are more intolerant to Sulphanilamide than men. The majority of cases with Gonococcal Vulvo-vaginitis failed to pass the tests of cure during the observation period. In spite of this, however, fewer complications are seen in the Female Department since the introduction of Sulphanilamide treatment. The preparations used in the Female Department have been chiefly Sulphanilamide and M. & B. 693. It is intended to investigate the use of Uleron in the treatment of gonococcal infections in the female sex.

**Chancroid.**

There were 72 patients suffering from Chancroid during 1938. These patients are observed for three months, whenever possible, in order to exclude Syphilis. Dark Ground examination for *Treponema Pallidum* is carried out on all these cases before treatment is commenced. The usual local treatment is daily soaking of the sore with fresh warm Potass. Permang. solution, followed by the application of Pulv. Iodoformi. If this treatment does not cure the condition, M. & B. 693 is given by mouth in 3 gramme daily doses for four days. The results obtained with M. & B. 693 are good, and there is now no necessity to admit these cases to Hospital in order to give Dmelcos Vaccine intravenously.

**General.**

There were twelve Medical Practitioners who attended the Municipal Clinic for instruction in the modern methods of diagnosis and treatment of Venereal Diseases during the year 1938. Eleven qualified for the Ministry of Health Certificate.



APPENDIX I.

RETURN RELATING TO ALL PERSONS WHO WERE TREATED AT THE TREATMENT CENTRE AT SALFORD DURING THE YEAR ENDED THE 31ST DECEMBER, 1938.

	Syphilis.		Soft Chancre.		Gonorrhœa.		Conditions other than venereal.		Totals.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Totals.
1. Number of cases on 1st January under treatment or observation	355	165	13	—	376	138	225	34	969	337	1,306
2. Number of cases removed from the register during any previous year which returned during the year under report for treatment or observation of the same infection	21	5	—	—	2	6	—	—	23	11	34
3. Number of cases dealt with for the first time during the year under report (exclusive of cases under Item 4) suffering from—											
Syphilis, primary	58	3	—	—	—	—	—	—	58	3	61
" secondary	20	6	—	—	—	—	—	—	20	6	26
" latent in 1st year of infection*	4	2	—	—	—	—	—	—	4	2	6
" all later stages	47	30	—	—	—	—	—	—	47	30	77
" congenital	4	7	—	—	—	—	—	—	4	7	11
Soft Chancre	—	—	71	1	—	—	—	—	71	1	72
Gonorrhœa, 1st year of infection	—	—	—	—	548	143	—	—	548	143	691
Gonorrhœa, later	—	—	—	—	7	—	—	—	7	—	7
Conditions other than venereal	—	—	—	—	—	—	783	149	783	149	932
4. Number of cases dealt with for the first time during the year under report known to have received treatment for the same infection, or to have been under observation at other Centres	25	3	1	—	35	—	10	4	71	7	78
TOTALS OF ITEMS 1, 2, 3 AND 4	534	221	85	1	968	287	1,018	187	2,605	696	3,301
5. Number of cases discharged after completion of treatment and final tests of cure or after diagnosis as non-venereal	16	4	44	1	326	58	815	151	1,201	214	1,415
6. Number of cases which ceased to attend before completion of treatment and were, on first attendance, suffering from :—											
Syphilis, primary	20	4	—	—	—	—	—	—	20	4	24
" secondary	9	3	—	—	—	—	—	—	9	3	12
" latent in 1st year of infection*	3	1	—	—	—	—	—	—	3	1	4
" all later stages	23	13	—	—	—	—	—	—	23	13	36
" congenital	4	5	—	—	—	—	—	—	4	5	9
Soft Chancre	—	—	9	—	—	—	—	—	9	—	9
Gonorrhœa, 1st year of infection	—	—	—	—	45	43	—	—	45	43	88
Gonorrhœa, later	—	—	—	—	—	1	—	—	—	1	1
7. Number of cases which ceased to attend after completion of treatment but before final tests of cure	25	11	—	—	122	24	—	—	147	35	182
8. Number of cases transferred to other Centres or to institutions or to care of private practitioners	75	8	12	—	113	8	4	1	204	17	221
9. Number of cases remaining under treatment or observation on 31st December	359	172	20	—	362	153	199	35	940	360	1,300
TOTALS OF ITEMS 5, 6, 7, 8 AND 9	534	221	85	1	968	287	1,018	187	2,605	696	3,301
10. The totals should agree with those of Items 1, 2, 3 and 4)											
11. Number of cases in the following stages of syphilis included in Item 6 which failed to complete one course of treatment :—											
Syphilis, primary	5	1	—	—	—	—	—	—	5	1	6
" secondary	2	—	—	—	—	—	—	—	2	—	2
" latent in 1st year of infection*	—	1	—	—	—	—	—	—	—	1	1
" all later stages	2	7	—	—	—	—	—	—	2	7	9
" congenital	1	1	—	—	—	—	—	—	1	1	2
12. Number of attendances :—											
(a) for individual attention of the medical officers	12,616	5,347	416	—	10,893	3,017	3,539	634	27,464	8,998	36,462
(b) for intermediate treatment, e.g., irrigation, dressing	792	50	553	—	34,665	11,446	3,789	404	39,799	11,900	51,699
TOTAL ATTENDANCES	13,408	5,397	969	—	45,558	14,463	7,328	1,038	67,263	20,898	88,161

APPENDIX I.—Continued.

RETURN RELATING TO ALL PERSONS WHO WERE TREATED AT THE TREATMENT CENTRE AT SALFORD DURING THE YEAR ENDED 31ST DECEMBER, 1938.

	Syphilis.		Soft Chancre.		Gonorrhœa.		Conditions other than venereal.		Totals.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	T.
12. In-patients :—											
(a) Total number of persons admitted for treatment during the year.....	26	15	3	1	20	23	5	7	54	46	
(b) Aggregate number of "in-patient days" of treatment given.....	979	806	145	47	385	1,099	54	152	1,563	2,104	3
	Under 1 year.		1 and under 5 years.		5 and under 15 years.		15 years and over.		Totals.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	T.
13. Number of cases of congenital syphilis in Item 3 above classified according to age periods.....	1	1	—	—	1	—	2	6	4		7
14.—	Arsenical										
	Approved Arsenobenzene Compounds.		Others		Mercury.		Bismuth.				
(a) Names of Chief preparations used in the treatment of Syphilis .....	Stabilarsan, and Novarsenobillon.		Tryparsamide		Colloidol Mercury Sulphide.		Chlorostab and Bivatol				
(b) Total number of injections given (out-patients and in-patients) .....	4,320		76		451		6,587				
15. Pathological Work :—	Microscopical.		Cultural for Gonorrhœa		Serum		Cerebro-spinal fluid		Other diagnostic Ven. Dis.		
	for Syphilis	for Gonorrhœa			for Syphilis	for Gonorrhœa					
(a) Number of specimens examined at, and by the medical officer of, the Treatment centre .....	123	7,663	—		—		—		—		
(b) Number of specimens from patients attending at the Treatment Centre sent for examination to an approved laboratory .....	—	—	74		6,702*		1,494‡		6		

\* Wasserman & Kahn Tests.  
‡ Gonococcal Complement Fixation Tests.

STATEMENT SHOWING THE SERVICES RENDERED AT THE TREATMENT CENTRE DURING THE YEAR, CLASSIFIED ACCORDING TO AREAS IN WHICH THE PATIENTS RESIDED.

Name of County or County Borough (or Country in the case of persons residing elsewhere than in England and Wales) to be inserted in these headings.	Salford	Man- chester	Lancs.	Cheshire	Bolton	Oldham	Seamen, British	Seamen, Foreign	Other Areas	T.
A. Number of cases from each area included under the following headings in Item 3										
Syphilis.....	70	38	53	2	1	3	5	5	4	
Soft Chancre.....	20	15	20	1	1	—	6	7	2	
Gonorrhœa.....	244	170	203	25	5	5	15	14	17	
Conditions other than venereal.....	335	223	232	44	11	5	28	34	20	
TOTAL .....	669	446	508	72	18	13	54	60	43	
B. Total number of attendances of all patients residing in each area.....	37,074	20,284	23,709	3,158	453	481	867	298	1,837	8
C. Aggregate number of "In-patient days" of all patients residing in each area.....	2,144	398	953	—	—	—	134	—	38	



## SECTION IV.

# Report Relating to the Meat and Food Inspection, Milk Supply, and the Diseases of Animals Acts.

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### **Inspection of Meat and other Food.**

The examination of meat and other foods is controlled by Inspectors who are qualified to carry out these duties. The Inspectors are responsible for the examination of all meat and other foods sold or exposed or deposited or in preparation for sale, and it is their duty to ensure that no food sold in the City is unsound, unwholesome or diseased.

This, however, is impossible without the co-operation of the public, who should, at all times, insist on food which they know has not been exposed to such contamination as flies or dust.

There is still room for improvement in the handling of food by the vendor before sale, and the purchaser should be satisfied as to the vendor's cleanliness before buying.

The sale of unwrapped bread shows little sign of diminishing, but it is to be hoped that there will be a more general demand for wrapped bread.

There are 264 retail butchers' shops in the City, and 564 visits of inspection have been made during the year. Generally speaking, the retail meat shops are kept in a satisfactory manner, but occasionally complaints have had to be made as to general untidiness, such as allowing rubbish to accumulate on the floor or benches.

In one instance unsound meat was found. A summons was issued and a fine imposed on the offender.

In many instances, the method of marking meat is not strictly in accordance with the provisions of the Merchandise Marks (Imported Goods) No. 7 Order, which calls for the marking of imported meat " Foreign," " Empire " or the country of origin. The offenders have been warned that a further contravention would be reported to the Health Committee with a view to a summons being issued. In one case a summons was issued and a conviction made.



**Food Preparing Premises.**

A register of these premises is kept, and they are controlled by Food Preparing Byelaws, which require a high standard of cleanliness and sanitation. The majority of these premises are concerned with the preparation of meat products, such as Brawn, Black Puddings, Sausages, Pies, etc.

One hundred and eighty-eight visits of inspection have been made during the year, and attention has been paid to the cleanliness of the premises, utensils and persons working there, and especially to the quality and methods of handling the meat.

In some cases, fault was found regarding the general untidiness of the premises, and in one instance legal proceedings were taken against an offender on various charges with respect to his premises, and the food prepared for sale. Fines amounting to £60 were imposed.

**Offensive Trades.**

The following is a list of the offensive trades in the City. There have been no complaints arising from these trades.

NATURE OF TRADES.

Tripe Dressing .....	3
Soap Works .....	2
Tanneries.....	1
Skin Dressers .....	1
Gut Scrapers.....	1
	—
Total.....	8
	—

**Slaughterhouses.**

There are four licensed private slaughterhouses and one public slaughterhouse in the City. Two of the private slaughterhouses are used for killing pigs only. The public slaughterhouse is divided into booths, one booth being retained for casual slaughtering of cattle and sheep, two others let to private butchers, and one used for horse slaughtering.

The slaughterhouses are visited at all times when slaughtering takes place, and all carcasses of animals slaughtered in the City are examined.

The number of visits made by the Inspectors during the year was 1,813, and the number of carcasses inspected :—

Cattle .....	1,058
Sheep .....	10,545
Pigs .....	17,566

**The Slaughter of Animals Act, 1933.**

The requirements of this Act necessitate strict attention being paid to the way in which animals are treated while awaiting slaughter, and to ensure that humane methods of slaughter are used. The Act states that no person shall slaughter animals in a slaughterhouse unless he is licensed by the Local Authority and, in this connection, sixty licences have been granted.

**Open-air Market.**

This market is held on Mondays and Fridays each week, Bank Holidays excepted. Such articles as Fish, Fruit, Vegetables, Poultry, Rabbits, Meat, etc., are regularly exposed for sale.

Eight hundred and sixty-two inspections of stalls were made during the year, and special attention was paid to the stalls where meat was exposed for sale, to ensure that the provisions of the Public Health (Meat) Regulations, 1924, with regard to the screening of the top, back and sides of the stall to prevent contamination, were being complied with. A new market is in course of erection and will be opened shortly. Provision will be made for adequate protection from dust of all articles of food exposed for sale.

On the whole, the quality and soundness of the articles sold are good. In a few instances, a surrender of fruit has been made by Stallholders to the Inspector when the Inspector has considered the fruit unsound.

TABLE OF MONTHLY SEIZURES OF DISEASED AND UNSOUND FOOD DISCOVERED DURING ROUTINE INSPECTION, AND OF FOOD SURRENDERED BY THE OWNERS THEREOF DURING 1938.

Month.	No. of seizures.	Beef lbs.	Mutton lbs.	Pork lbs.	Veal lbs.	Miscel. lbs.	Totals lbs.
January .....	269	1,717	68	9,656	—	—	11,441
February .....	249	531	680	9,707	—	34	10,952
March .....	210	415	2,522	4,909	—	11,660	19,506
April .....	227	1,153	1,836	5,340	—	—	8,329
May .....	170	412	544	3,905	100	3	4,964
June .....	197	1,324	342	6,674	—	38	8,378
July .....	259	1,898	204	13,388	—	1,120	15,490
August .....	245	657	476	8,413	—	254	10,666
September .....	194	18	952	6,906	—	—	8,130
October .....	191	1,279	1,322	6,909	—	—	9,510
November .....	189	282	2,040	4,271	—	—	6,593
December .....	292	213	1,908	3,018	—	—	5,139
Totals....	2,692	9,899	12,894	83,096	100	13,109	119,098

The miscellaneous articles condemned were :—

Potatoes.....	1,120 lbs.
Oranges .....	224 lbs.
Onions .....	11,648 lbs.
Tinned Beans .....	30 lbs.
Fish .....	12 lbs.
Cake .....	32 lbs.
Cornflakes .....	3 lbs.
Duck.....	2 lbs.

TABLE SHOWING AMOUNT OF FOOD CONDEMNED FROM VARIOUS CAUSES  
DURING 1938.

No. of Seizures.	Cause of Seizure.	Weight in lbs.
1,583	Tuberculosis.....	59,561
57	Swine Fever.....	13,584
135	Pleurisy.....	926
244	Cirrhosis .....	741
111	Congestion .....	3,725
83	Pneumonia .....	551
71	Necrosis .....	303
50	Cystic .....	214
15	Unsound .....	13,402
197	Moribund .....	15,188
17	Abscess .....	232
23	Distomatosis .....	194
1	Swine Erysipelas.....	214
2	Dropsy .....	404
21	Decomposed.....	1,032
6	Emaciation.....	1,150
5	Injury .....	341
5	Jaundice .....	1,014
16	Septicæmia.....	3,338
8	Infested .....	257
2	Pyæmia.....	404
10	Peritonitis.....	2,066
3	Nephritis.....	22
4	Pericarditis.....	28
4	Malignant Tumour.....	94
17	Fatty Infiltration .....	76
1	Fracture .....	25
1	Cavernous Angeoma.....	12
Total .....		119,098

Of the total weight seized 26 tons 12 cwt. or 50% was seized on account of tuberculosis.



### The Milk Supply.

All the milk sold in the City is produced at farms outside the district, so that the supervision consists chiefly of sampling and inspection of dairies.

The number of farms supplying milk direct to Salford is approximately 250, and these are situated in Lancashire, Cheshire, Derbyshire, Yorkshire and Staffordshire. There is also a large quantity of pasteurised and raw milk retailed in the City by dairymen with registered premises in adjoining towns.

There are 767 registered retail purveyors of milk, including 636 persons who retail bottled milk only. The improvement in the type of shop from which loose milk is sold has been maintained. It is hoped that, by removing from the register the shops of the mixed business type which sell loose milk in conjunction with other articles, to confine the sale of loose milk to shops selling only milk and dairy produce.

The registered retail purveyors of milk are classified as follows :—

Milk depôts and small dairies .....	44
Retail milk shops selling other articles in conjunction with milk .....	59
Shops selling bottled milk in conjunction with other articles .....	636
Retail milk dealers selling milk in the City who have registered dairies outside the City .....	28

Eight hundred and thirty-five visits to dairies and milk shops have been made during the year. Special attention is paid to the methods of cleansing and sterilising utensils, the storage of milk, the sterilising of milk bottles and the general structure and sanitary condition of the premises.

The continued increase of the sale of bottled milk calls for strict supervision of this section of the dairy, in order to ensure the efficient sterilisation of all bottles before being used. In this connection 66 milk bottles from dairies have been tested during the year for efficiency of sterilisation ; of these, 12, or 18 per cent. were found to be improperly sterilised. In each instance, the dairyman concerned was cautioned and a further test made at a later date, when a marked improvement was noted. The percentage of milk bottles improperly sterilised during 1938 was lower than that of the previous year, and it is the aim of this Department to maintain this improvement.

Though, on the whole, the methods of production, transport, storage and distribution of milk, and the sterilisation of cans and utensils have continued satisfactory, frequent sampling and testing is at all times necessary.

### Milk (Special Designations) Order, 1936.

The special designations which may be used in relation to milk under this Order are "Tuberculin Tested," "Accredited" and "Pasteurised."

These grades of milk may be shortly described as follows :—

**TUBERCULIN TESTED MILK** is milk from cows which have passed a veterinary examination and a tuberculin test ; it is bottled on the farm or elsewhere ; and may be raw or pasteurised. If it is bottled on the farm, it may be described as Tuberculin Tested Milk (Certified). If pasteurised, it is described as Tuberculin Tested Milk (Pasteurised). The milk must contain no coliform bacilli in 1/100 of a millilitre and, if raw, the milk must satisfy the prescribed methylene blue reduction test while, if pasteurised, it must not contain more than 30,000 bacteria per millilitre.

**ACCREDITED MILK** is raw milk from cows which have passed a veterinary examination ; it is bottled on the farm or elsewhere. It must satisfy the same bacteriological tests as raw Tuberculin Tested milk.

**PASTEURISED MILK** is milk which has been retained at a temperature of 145°-150° for at least thirty minutes ; and does not contain more than 100,000 bacteria per millilitre.

The following 59 licences were granted during 1938 to use special designations under the above Order :—

15 Dealers' Licence to sell milk as "Tuberculin Tested."

3       ,,       ,,       ,,       ,,       "Accredited."

25       ,,       ,,       ,,       ,,       "Pasteurised."

6 Supplementary Licence to sell milk as "Tuberculin Tested."

—       ,,       ,,       ,,       ,,       "Accredited."

6       ,,       ,,       ,,       ,,       "Pasteurised."

2 Licences in respect of Pasteurising Establishments.

2 Licences in respect of "Bottling Establishments" with regard to "Tuberculin Tested" and "Accredited" milks.

School Milk.

As in previous years, milk has been supplied every day, excepting when there has been no school, to school children under the Milk Marketing Board's scheme.

One of the conditions is that the milk supplied should be approved by the Medical Officer of Health. Pasteurised milk is supplied, and this is regularly examined for bacterial content and efficient pasteurisation. The milk bottles are examined periodically for efficient sterilisation.

Milk Supplied to Hospitals and Open-air Schools.

The Corporation milk contracts for these supplies are for "Tuberculin Tested," "Accredited" and "Pasteurised" milk. Approximately 275 gallons of "Tuberculin Tested," 40 gallons of "Accredited" and 100 gallons of "Pasteurised" milk are delivered daily to the Corporation Hospitals and Open-air Schools. These milk contracts expired on September 30th and were not renewed. All milk supplied to Hospitals and Schools is now pasteurised.

TABLE SHOWING BACTERIOLOGICAL EXAMINATION OF SAMPLES OBTAINED FROM CONTRACT SUPPLY.

Grade of Milk.	No. of Samples Examined.	Bacterial Content.*			Presumptive Coli Test.		
		Satis- factory.	Not Satis- factory.	% Not Satis- factory.	B. Coli Absent in 100 millilitre.	B. Coli Present in 100 millilitre.	% Not Satis- factory.
Tuberculin Tested	43	38	5	11·6	33	10	23·3
Accredited .....	15	14	1	6·7	14	1	6·7
Pasteurised .....	78	67	11	14·1	55	23	29·5

\*Examined by the Methylenc Blue Reduction Test for Tuberculin Tested and Accredited Milk, and by the Plate Count Test for Pasteurised Milk.

Tuberculous Milk.

Three hundred and seventy-four samples of milk, nine of which were Pasteurised, were obtained and submitted for bacteriological examination for B. Tuberculosis. These samples are obtained on the arrival of the milk at the dairy. Of the 374 samples examined, 31 or 8·3 per cent., were found to be positive. It should be noted that the greater part of the farm milk after reaching the City is Pasteurised and is not delivered to the consumer in its raw state. The reduction in the number of samples taken is due to a large dairy in the Broughton District having closed.



When a sample of milk is found to contain B. Tuberculosis, the Medical Officer of the district in which the milk is produced is immediately notified of the address of the farm ; the herd is then inspected under Section 4 of the Milk and Dairies (Consolidation) Act, 1915.

The cows which are found to be giving tuberculous milk are slaughtered under the Tuberculosis Order, by the respective Local Authorities.

#### **Phosphatase Test.**

The Phosphatase Test, which was begun in 1935 in order to ascertain whether milk was being properly Pasteurised or not was continued during 1938.

One hundred and six samples of " Pasteurised " milk have been examined and the following table shows the results of the test :—

	No. of Samples.	Correctly Pasteurised.	Not correctly Pasteurised.	Grossly underheated or raw.
1936	110	35	36	39
1937	90	46	23	21
1938	106	67	28	11

As a result of the above tests, enquiries were made into the cause of the unsatisfactory samples, and certain defects in the pasteurising plants remedied. This brought about a marked improvement in 1938, and still better results may be expected in the future in consequence of this test.

#### **Acts and Orders Relating to Diseases of Animals.**

The Health Committee are the Executive Committee of the Local Authority for the purposes of the Diseases of Animals Acts, and General Orders made under the Acts.

These Acts and Orders entail a considerable amount of work which cannot be adequately expressed in tables and figures.

#### **Anthrax Order, 1938.**

Sixteen cases of sudden death in cattle were investigated for Anthrax. Specimens were submitted to the Bacteriologist for examination and, in each case, proved negative. They were all carcasses of cattle found dead in cattle wagons on arrival in Salford.

#### **Swine Fever Order, 1938.**

Eleven outbreaks of Swine Fever were notified to the Ministry of Agriculture and Fisheries during the year. All the outbreaks were found in slaughterhouses in the course of routine meat inspection. Some were in pigs on licence from " Infected Premises " and others were from premises where the disease had not been previously reported.

The total number of carcasses condemned from all outbreaks was 67. They were moved to the Corporation's destructor and destroyed by burning under the supervision of an Inspector.

#### **Foot and Mouth Disease (Regulation of Movement) Order, 1938.**

Owing to widespread outbreaks of Foot and Mouth Disease in the country the Ministry of Agriculture and Fisheries made Orders in April prohibiting the movement of cattle, sheep and pigs except on licence issued by the Local Authority. As it was possible that some of the animals which had been in contact with Foot and Mouth Disease had been moved to lairs in Salford, all animals in the lairs were sent for immediate slaughter and the lairs disinfected and limewashed. Later these Orders were revoked and the usual movement of animals permitted.

The following licences were issued and countersigned during the period, the number of animals affected by the restrictions being 5,192.

	ISSUED.		COUNTERSIGNED.	
	Licences.	Animals.	Licences.	Animals.
Cattle .....	13	153	19	184
Sheep .....	23	1,645	41	2,228
Pigs.....	51	872	5	110
	87	2,670	65	2,522

#### **Importation of Dogs and Cats Order, 1928.**

This order is to prevent the introduction into Great Britain of rabies through the agency of canine or feline animals brought from overseas. Thirty-four visits to ships were made in order to ascertain that the dogs were being controlled in accordance with the provisions of the Order.

#### **Animals (Landing from Ireland, Channel Islands and Isle of Man) Order, 1933, and Importation of Canadian Cattle Order, 1933.**

There are eight cattle lairs in the City, into which cattle and sheep under the above Order are taken. During the year, 1,463 licences were received from Inspectors of the Ministry of Agriculture and Fisheries, authorising the movement of 12,902 cattle and 52,232 sheep to the lairs from the various Ports. After six days' detention, the cattle do not require a licence to accompany their movement. Prior to this detention, they can only be moved on licence for slaughter and, in this connection, 841 licences were issued, involving 8,879 cattle and 42,520 sheep.

The cattle lairs are frequently visited and inspected in order to check the movement of imported animals and to ensure that the lairs are at all times kept in such a condition as not to become a nuisance.

**Transit of Animals Orders, 1927-31.**

These Orders contain a number of provisions relating to the carriage of animals by road and rail. There are three cattle receiving and forwarding stations in the City, which are regularly visited and inspected. All the railway wagons, cattle pens and platforms are thoroughly cleansed and disinfected after use.

## ANIMALS RECEIVED INTO THE CITY BY RAIL DURING 1938.

Cattle.	Sheep.	Calves.	Horses.
47,449	273,894	—	—

## ANIMALS FORWARDED OUT OF THE CITY BY RAIL DURING 1938.

Cattle.	Sheep.	Calves.	Horses.
253	358	—	—

Other Acts and Orders dealt with during the year include :—

Foot and Mouth Disease Order, 1928.

Foot and Mouth Disease Order, Boiling of Animal Foodstuff Order.

Foot and Mouth Disease Order, Packing Material Order.

Poultry (Exposure for Sale) Order, 1937.

Poultry Markets and Receptacles (Disinfection) Orders.

Regulation of Movement of Swine Order, 1922.



## SECTION V.

# Pathological Laboratory Report

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The appended tables show the work carried out at the City Laboratory and at Hope Hospital Laboratory during 1938. The total number of specimens examined, including 482 from the boroughs of Prestwich and Hazel Grove, was 44,267, an increase of over 4,000 on that of last year.

18,183 specimens were examined for Hope Hospital. The demands made of the laboratory there continue to grow steadily and, during the past three years, the work carried out there has gone up by fifty per cent. This increase is inevitable as the modern tendency is to make more and more use of laboratory facilities in the clinical investigation of disease.

The work of the City Laboratory, Regent Road, has also increased considerably as all diphtheria swabs from outside sources are now cultured as a routine on plates of tellurite medium (Glass's modification) as well as on Loeffler's medium. This gives approximately 8 per cent. more positives than culture on one or other of the above media.

Cultures of fæces, urine, etc., from cases of suspected typhoid, dysentery or food poisoning are also now plated as a routine on brilliant green eosin agar as well as on McConkey's medium. There were no outbreaks of food poisoning, dysentery or typhoid during the year.

Weekly examinations of the swimming bath water throughout the summer were almost consistently good in the case of Seedley and Pendleton Baths. Blackfriars gave 23 bad results as the system of filtration and chlorination there has not been satisfactory. In the case of Regent Road, there were 17 bad results; the chlorination and filtration system there is good and was working satisfactorily throughout the summer. The high proportion of bad results was due to the water becoming infected with a chlorine resistant chromo bacterium aquatile. This organism is a harmless saprophyte and various attempts were made to eradicate it from the water by increasing the chlorine for periods of 12 hours and over up to two parts per million, with only moderate success. As the bacterium was non-pathogenic, it was not considered advisable to close the baths for more than a short period at a time in order to deal with it. Recent examinations show that that the organism is still present but only in small numbers. Appended table gives a résumé of the results of the examinations carried out—

Good means conforming to Ministry of Health standards which are high ;

Fair means moderately below this ;

Bad means a high bacterial count, *i.e.*, 3,000 per c.cm. or over.

B. Coli were almost consistently absent in all examinations, including those with high bacterial counts.

Monthly bacterial examinations of the tap water from the two sources of Salford water supply, that is, from the Manchester Longdendale and Thirlmere supplies, gave satisfactory total bacterial counts at 22° C. and at 37° C.

On two occasions, however, the Regent Road tap water showed faecal B. Coli present in 50 c.c.'s and, on two other occasions, the Durham Road tap water showed faecal B. Coli present in 50 c.c.'s. This is not really satisfactory but is probably due to the fact that the Manchester and Salford water supply is not filtered. The B. Coli occasionally found are, in all probability, not due to human pollution.

#### Swimming Bath Water Reports, 1938.

	Good.	Fair.	Bad.	Total.
Seedley .....	71	2	2	75
Pendleton .....	42	3	—	45
Blackfriars .....	14	9	23	46
Regent Road .....	8	20	17	45
	135	34	42	211

Also—

- 1 Examination of water from Manchester Swimming Club.
- 5 Examinations of water from Regent Road Filters.

#### Examinations made for other Boroughs.

Nature of Investigation.	Prestwich.	Hazel Grove.	Total.
Examination of Swabs for B. Diphtheria	347	—	347
Examination of Swabs for Hæmolytic Streptococci.....	1	—	1
Examination of Sputa for B. Tuberculosis	21	—	21
Examination of Drinking Water.....	34	—	34
Milk Inoculations for B. Tuberculosis....	10	18	28
Milk Counts .....	2	—	2
Milk B. Coli Tests .....	11	8	19
Milk Methylene Blue Tests.....	9	17	26
Agglutination Tests for Typhoid Infection .....	1	—	1
Virulence Tests .....	3	—	3
Total.....	439	43	482

## Examination of specimens from Salford.

[illegible]



PARTICULARS OF INVESTIGATIONS CARRIED OUT IN THE PATHOLOGICAL LABORATORY DURING THE YEAR 1938—Continued.

Nature of Investigations.	Lady- well Sanat- orium.	Hope Hospital.	Veterinary Depart- ment.	Tuber- culosis Depart- ment.	Venereal Diseases Depart- ment.	School Medical Depart- ment.	Maternity and Child Welfare Depart- ment.	General Practi- tioners.	Salford Royal Hospital.	Various.	Total
<b>Serological</b> Examinations											
Wassermann Tests .....	—	734	—	—	3,351	—	—	162	483	—	4,730
Kahn Tests .....	—	734	—	—	3,351	—	—	162	483	—	4,730
Gonorrhoeal Complement Fixation Tests .....	—	47	—	—	1,494	—	—	4	8	—	1,553
Agglutination Tests .....	43	12	—	—	—	—	—	7	—	—	62
<b>Pathological</b> Examinations											
Cerebro-Spinal Fluids .....	82	241	—	—	—	—	—	—	—	—	323
Pleural Fluid .....	2	103	—	—	—	—	—	—	—	—	105
Autopsies .....	—	221	—	—	—	—	—	—	—	—	221
Histological Sections .....	—	754	—	—	—	—	—	—	—	—	754
Museum Specimens .....	—	1	—	—	—	—	—	—	—	—	1
<b>Biochemical</b> Examinations											
Blood Sugars .....	1	1,195	—	—	—	—	—	—	—	—	1,196
Urea .....	—	201	—	—	—	—	—	—	—	—	201
Inorganic Phosphate .....	—	1	—	—	—	—	—	—	—	—	1
Uric Acid .....	—	2	—	—	—	—	—	—	—	—	2
Calcium .....	—	3	—	—	—	—	—	—	—	—	3
Spectroscopic Examination .....	—	5	—	—	—	—	—	—	—	—	5
Urea Clearance .....	—	354	—	—	—	—	—	—	—	—	354
Test Meals .....	—	437	—	—	—	—	—	—	—	—	437
Stools for Occult Blood .....	—	351	—	—	—	—	—	—	—	—	351
Van Den Bergh Reaction .....	—	28	—	—	—	—	—	—	—	—	28
Urine—Routine Examination .....	1	670	—	—	—	—	—	—	—	—	671
Colloidal Gold Reaction .....	—	24	—	—	—	—	—	—	—	—	24
Milk Phosphatase .....	—	—	107	—	—	—	—	—	—	—	107
Urine for Calcium .....	—	3	—	—	—	—	—	—	—	—	3
Urine for Arsenic .....	—	1	—	—	—	—	—	—	—	—	1
Stools Identification of Heavy Metals .....	—	1	—	—	—	—	—	—	—	—	1
<b>Miscellaneous</b> Examinations											
Mouse Inoculations .....	—	189	—	—	—	—	—	—	—	—	189
Smears for Trichomanas .....	—	117	—	—	—	—	—	—	—	—	117
Vaccines .....	7	9	—	—	—	—	—	2	—	—	18
Friedman Tests .....	—	31	—	—	—	—	19	—	—	—	50
Various .....	4	—	6	3	—	1	—	2	—	—	16
	8,868	18,183	734	615	8,274	2,274	126	3,386	992	333	43,785

SECTION VI.

Report relating to the  
City Analyst's Department.

The following Table (Table 1) contains particulars of 1,284 samples examined under the Food and Drugs (Adulteration) Act, 1928, during 1938.

TABLE 1.

SAMPLES.	Number Examined.	Number Adulterated.		Per cent. Adulteration.
		Preservatives Only.	Other Ways.	
Milk.....	930	—	58	6·2
Skimmed Milk.....	2	—	—	—
Condensed Milk.....	10	—	—	—
Cream .....	3	—	—	—
Butter .....	11	—	—	—
Cheese .....	7	—	—	—
Margarine .....	15	—	1	6·7
Cooking Fat.....	2	—	—	—
Lard.....	4	—	—	—
Bread and Butter.....	6	—	2	33·3
Eccles Cakes .....	9	—	7	77·8
Shredded Beef Suet with Rice Flour .....	5	—	—	—
Shredded Beef Suet.....	1	—	1	100·0
Chocolate Swiss Roll.....	4	—	2	50·0
Tea.....	5	—	—	—
Coffee.....	3	—	—	—
Cocoa.....	10	—	—	—
Jam .....	19	4	—	21·1
Flour .....	13	—	—	—
Minced Meat .....	4	—	—	—
Sausage.....	6	1	1	33·3
Tinned Tomatoes .....	6	—	—	—
Tinned Strawberries.....	1	—	—	—
Tinned Pineapples .....	1	—	—	—
Baked Beans.....	6	—	—	—
Potted Meat.....	2	—	1	50·0
Tinned Meat .....	1	—	—	—
Tinned Sild .....	4	—	1	25·0
Bristling in Oil .....	1	—	—	—
Sardines in Oil .....	1	—	—	—
Barley .....	4	—	—	—
Rice.....	4	—	—	—
Ground Rice .....	3	—	—	—
Sugar.....	1	—	—	—
Diabetic Chocolate .....	1	—	—	—
Vinegar .....	11	—	1	9·1
Pepper.....	5	—	—	—
Treacle .....	4	—	—	—
Toffee .....	2	—	1	50·0
Sauce.....	2	—	—	—
Sultanas .....	6	—	—	—
Currants .....	4	—	—	—
Glaze Cherries.....	2	—	—	—
Candied Peel .....	4	—	—	—
Ground Almonds.....	5	—	—	—
Dried Fruit .....	5	—	—	—
Tapioca.....	3	—	1	33·3



TABLE 1.—Continued.

SAMPLES.	Number Examined.	Number Adulterated.		Per cent. Adulteration.
		Preservatives Only.	Other Ways.	
Semolina.....	3	—	—	—
Lentils.....	2	—	—	—
Split Peas.....	2	—	—	—
Arrowroot.....	2	—	—	—
Ground Ginger.....	3	—	—	—
Dried Mint.....	3	—	—	—
Dried Sage.....	2	—	—	—
Dried Parsley.....	1	—	—	—
Fish Dressing.....	1	—	—	—
Mustard.....	2	—	—	—
Mustard Compound.....	2	—	—	—
Malt Extract and Cod Liver Oil.....	5	—	—	—
Raspberry Vinegar with Olive Oil.....	3	—	—	—
Olive Oil.....	3	—	—	—
Castor Oil.....	5	—	—	—
Camphorated Oil.....	5	—	—	—
Glycerine.....	5	—	1	20·0
Baking Powder.....	5	—	—	—
Mixed Spice.....	2	—	—	—
Rochelle Salts.....	6	—	—	—
Cream of Tartar.....	6	—	—	—
Glauber Salts.....	3	—	1	33·3
Borax.....	6	—	1	16·7
Epsom Salts.....	3	—	—	—
Seidlitz Powder.....	4	—	—	—
Compound Syrup of Figs....	2	—	—	—
Glycerine of Borax.....	5	—	1	20·0
Whisky.....	5	—	—	—
Rum.....	3	—	—	—
Boracic Ointment.....	7	—	2	28·6
Boracic Powder.....	2	—	—	—
Zinc Ointment.....	4	—	1	25·0
Mercury Ointment B.P. ....	2	—	—	—
Mercurial Ointment B.P.C....	2	—	—	—
Lysol Ointment.....	1	—	1	100·0
Stainless Iodine Ointment....	3	—	2	66·7
Iodine Paint.....	1	—	1	100·0
Aspirin Tablets.....	3	—	—	—
Gregory Powder.....	2	—	—	—
	1,284	5	88	7·2

The adulterated sample of glycerine and borax was submitted by a private purchaser.

TABLE 2.

PERCENTAGE ADULTERATION—SALFORD.

Year.	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
Percentage of Adulteration ....	3.0	3.2	3.3	2.9	4.0	3.3	7.0	4.6	7.1	7.2
Total Samples.....	1491	1556	1445	1286	1337	1374	1275	1329	1323	1284
Formal Samples..	727	598	574	462	521	586	574	524	456	396
Informal Samples	764	958	871	824	816	788	701	805	867	888
No. of Samples per 100,000 of the population..	596	622	642	576	607	643	596	633	642	636

TABLE 3.

ADULTERATION OF MILK—SALFORD.

Year.	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
No. of Samples....	1028	1103	1100	1106	1003	885	1006	1027	1020	1006	923	930
Percentage of Adulteration....	2.1	3.9	2.5	3.3	2.1	1.7	4.2	1.2	4.6	3.0	5.9	6.2

TABLE 4.

MILK ADULTERATION—ENGLAND AND WALES.

Year.	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
Percentage of Adulteration....	6.9	8.2	7.8	6.6	6.4	7.3	7.7	7.2	7.4	6.7	7.0	Not available

TABLE 5.

AVERAGE COMPOSITION OF ALL MILK.

Month.	Number of Samples.	Total Solids per cent.	Fat per cent.	Solids-not-fat per cent.
January.....	77	12.35 { 12.23 12.40 12.42	3.55 { 3.46 3.61 3.59	8.80 { 8.77 8.79 8.83
February.....	68			
March .....	81			
April .....	70	12.38 { 12.28 12.45 12.38	3.53 { 3.48 3.55 3.55	8.85 { 8.80 8.90 8.83
May .....	84			
June.....	72			
July .....	76	12.54 { 12.44 12.54 12.61	3.70 { 3.62 3.71 3.73	8.84 { 8.82 8.83 8.88
August.....	64			
September.....	93			
October .....	94	12.58 { 12.68 12.58 12.44	3.77 { 3.80 3.79 3.69	8.81 { 8.88 8.79 8.75
November.....	85			
December .....	66			
	930	12.47	3.64	8.83

TABLE 6.

AVERAGE COMPOSITION OF FARMERS' MILK.

Month.	Number of Samples.	Total Solids per cent.	Fat per cent.	Solids-not-fat per cent.
January.....	46	12.39 { 12.20 12.46 12.57	3.60 { 3.44 3.65 3.74	8.79 { 8.76 8.81 8.83
February.....	41			
March .....	34			
April .....	55	12.41 { 12.28 12.70 12.36	3.56 { 3.48 3.72 3.53	8.85 { 8.80 8.98 8.83
May .....	32			
June.....	44			
July .....	31	12.65 { 12.57 12.62 12.70	3.80 { 3.75 3.80 3.82	8.85 { 8.82 8.82 8.88
August.....	32			
September.....	58			
October .....	34	12.67 { 12.79 12.66 12.46	3.89 { 3.93 3.92 3.80	8.78 { 8.86 8.74 8.66
November.....	18			
December .....	19			
	444	12.51	3.69	8.82



TABLE 7.  
AVERAGE COMPOSITION OF MILK OTHER THAN FARMERS' MILK.

Month.	Number of Samples.	Total Solids per cent.	Fat per cent.	Solids-not-fat per cent.
January.....	31	12.30 { 12.28 12.30 12.32	3.49 { 3.48 3.54 3.48	8.81 { 8.80 8.76 8.84
February.....	27			
March .....	47			
April .....	15	12.33 { 12.29 12.29 12.41	3.50 { 3.48 3.45 3.58	8.83 { 8.81 8.84 8.83
May .....	52			
June.....	28			
July .....	45	12.42 { 12.34 12.45 12.49	3.58 { 3.53 3.62 3.61	8.84 { 8.81 8.83 8.88
August.....	32			
September.....	35			
October .....	60	12.55 { 12.61 12.57 12.44	3.72 { 3.72 3.76 3.65	8.83 { 8.89 8.81 8.79
November.....	67			
December .....	47			
	486	12.43	3.59	8.84

TABLE 8.  
AVERAGE COMPOSITION OF ALL MILK—SALFORD.

Year.	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
Fat.....	% 3.80	% 3.70	% 3.64	% 3.57	% 3.59	% 3.53	% 3.51	% 3.55	% 3.65	% 3.66	% 3.67	% 3.64
Solids-not-fat	8.81	8.57	8.83	8.92	8.92	8.91	8.79	8.83	8.85	8.89	8.85	8.83
Total Solids	12.61	12.27	12.47	12.49	12.51	12.44	12.30	12.38	12.50	12.55	12.52	12.47

In Tables 9 and 14 will be found details of 93 samples reported upon as adulterated, a number corresponding to 7.2 per cent. adulteration for the year in Salford, which is the highest figure recorded since the year 1925. This must not be taken as implying that adulteration is on the increase in the City, as the figure given includes all informal and follow-up samples. On examining Table 9 it will be seen that many of the samples are coupled together and were taken for control purposes. The same applies to a lesser extent to Table 14. Such an exhaustive method of sampling will obviously give a much higher percentage of adulteration than one in which only odd samples are taken from each supply. Following the usual practice of the department, the majority of offences were dealt with either by interviewing the manufacturers or by letters of caution. Legal proceedings were, however, instituted in 12 cases, 8 of these being under the Food and Drugs (Adulteration) Act, 1928, the remainder being under the Pharmacy and Poisons Act, 1933. The fines (including costs) inflicted in these cases totalled £119 1s. 8d.

TABLE 9.  
MILK ADULTERATION.

No.	Nature of Adulteration.	Action Taken.	Remarks.
A 3024.....	Deficient 3.3% fat .....	Further samples genuine .....	Bottled Milk.
A 3040.....	Deficient 2.7% fat .....	Farmer notified .....	"Appeal to Cow" samples of poor quality.
A 3041.....	Deficient 10% fat .....		
A 3052.....	Deficient 6.7% fat .....		
A 3058.....	Deficient 6.7% fat .....		
A 3059.....	Deficient 2.7% fat .....		
A 3060.....	Deficient 2.7% fat .....		
A 3061.....	Deficient 18% fat .....		
A 3062.....	Deficient 16.7% fat .....	Further samples genuine .....	Bottled Milk.
A 3063.....	Deficient 23.3% fat .....		
A 3085.....	1.9% extraneous water, F.Pt. Hortvet Δ 0.516 .....	Further samples genuine .....	Bottled Milk.
A 3087.....	0.4% .....	Further samples genuine .....	Farmer's Milk.
A 3088.....	2.5% .....		
A 3089.....	1.1% .....		
A 3090.....	1.9% .....		
A 3156.....	Deficient 4.3% fat .....	See A 3058, etc. ....	Farmer's Milk.
A 3186.....	0.8% extraneous water, F.Pt. Hortvet Δ 0.526 ....	Further samples genuine .....	Farmer's Milk.
A 3187.....	0.6% .....		
A 3201.....	Deficient 4.3% fat .....	Supply kept under observation .....	Further sample genuine.
A 3313.....	Deficient 5% fat .....	Farmer cautioned by letter.....	Institution Milk.
A 3317.....	Deficient 5% fat .....		





TABLE 9—continued.

No.	Nature of Adulteration.	Action Taken.	Remarks.
A 3644.....	Deficient 6·7% fat .....	Caution by letter.....	Farmer supplying A 3635.
A 3683.....	Deficient 6·7% fat .....	Supply kept under observation.....	Farmer's Milk.
A 3687.....	Deficient 3·3% fat .....		
A 3731.....	7·3% extraneous water, F.Pt. Hortvet Δ 0·491 .....	Prosecution and conviction. Fined £5 and £4 9s. 2d. costs.	“Appeal to Cow” samples genuine.
A 3781.....	Deficient 1·7% fat .....	Farmer written .....	Institution Milk.
A 3848.....	Deficient 10% fat .....	Shopkeeper cautioned.....	Bottled Milk.
A 4012.....	4·7% extraneous water, F.Pt. Hortvet Δ 0·514 .....	Supply kept under observation } }	Further samples genuine.
A 4013.....	1·2%                    ”                    ”                    Δ 0·526 .....		
A 4019.....	0·8%                    ”                    ”                    Δ 0·529 .....		
A 4020.....	0·9%                    ”                    ”                    Δ 0·513 .....		
A 4237.....	2·9%                    ”                    ”                    Δ 0·506 .....	Supply kept under observation } }	Farmer's Milk.
A 4251.....	2·6%                    ”                    ”                    Δ 0·516 .....		
A 4252.....	0·5%                    ”                    ”                    Δ 0·524 .....		
A 4258.....	Deficient 3·3% fat .....	Further samples genuine .....	Bottled Milk.
A 4262.....	2·1% extraneous water, F.Pt. Hortvet Δ 0·507 .....	Farmer cautioned..... } }	Further samples genuine.
A 4266.....	0·9%                    ”                    ”                    Δ 0·510 .....		
A 4267.....	1·5%                    ”                    ”                    Δ 0·512 .....		
A 4268.....	0·7%                    ”                    ”                    Δ 0·509 .....		
A 4280.....	0·8%                    ”                    ”                    Δ 0·526 .....		
A 4281.....	5·3%                    ”                    ”                    Δ 0·469 .....		
A 4282.....	4·4%                    ”                    ”                    Δ 0·501 .....		

**Milk.**

930 samples of milk were examined during the year, 444 being samples of farmers' milk taken under Section 16 of the Food and Drugs (Adulteration) Act, in course of delivery in Salford to wholesalers and retailers. As will be noted from Tables 5, 6 and 7 the average butter fat content of all milk for the whole year was 3·64 per cent., that of farmers' milk being 3·69 per cent., and that of milk from all other sources 3·59 per cent. Farmers' milk, therefore, showed a slightly higher average for butter fat and it is interesting to note that similar figures have been obtained here throughout the last ten years.

Of the total milk samples taken during the year, 58 were adulterated or below the presumptive limits of 3·0 per cent. butter fat and 8·5 per cent. solids-not-fat, fixed by the Sale of Milk Regulations, 1901. This figure represents a percentage adulteration of 6·2, which is the highest figure recorded in Salford since the year 1921, although it is lower than the figures for milk adulteration throughout England and Wales during the last 12 years, which varied from 6·4 per cent. to 8·2 per cent.

In the following table will be found particulars of the various types of adulteration and the number of samples under each heading :

Milks deficient in fat only.....	28 or 3·0 per cent.
Milks containing added water only.....	26 or 2·8 per cent.
Milks deficient in fat and containing added water .....	4 or 0·4 per cent.
	<hr/> 58 or 6·2 per cent. <hr/>
Milks containing more than 3 per cent. added water .....	7 or 0·8 per cent.
Milks 10 per cent. or more deficient in fat.....	9 or 1·0 per cent.

No samples contained either colouring matter or preservative. In the next paragraphs will be found a brief account of the more interesting adulterated samples, and Appendix I contains the results on all samples examined by the freezing point test, these results being compared with the adulteration indicated by the presumptive limits of the Sale of Milk Regulations, 1901.

SAMPLES NOD. A 3040, A 3041, A 3052, A 3058, A 3059, A 3060, A 3061, A 3062  
AND A 3063.

These informal and formal samples were taken from supplies delivered by one farmer to a dairyman in Salford. The samples indicated above showed fat deficiencies varying from 2·7 to 23·3 per cent. and in addition, many of them were also deficient in solids-not-fat, although they gave normal freezing points. Visits were paid to the farm by your Public Analyst and Sampling Officer, the

milking arrangements inspected and supervised samples of the night and morning milk obtained. These "Appeal to Cow" samples gave on analysis the figures shown in the following table :—

TABLE 10.

No.	Total Solids.	Fat.	Solids-not-fat.	Freezing Point Hortvet $\Delta$
A 3064.....	11.30	2.90	8.40	0.542
A 3065.....	11.66	3.20	8.46	0.541
A 3066.....	11.46	3.00	8.46	0.544
A 3067.....	11.50	2.82	8.68	0.551
A 3068.....	11.00	2.70	8.30	0.542
A 3069.....	11.44	2.95	8.49	0.556

It will be observed that these figures are extremely similar to those obtained from the original samples, indicating that the deficiencies found were due to very poor quality milk and not to adulteration. While at the farm, it was observed that the whole of the herd consisted of British Friesian stock, a breed of cattle noted for the large quantity of milk yielded, which is very often of poorer quality than that from other breeds. A letter was sent to the farmer, drawing his attention to the very poor quality of his milk supply and advising him to take the necessary steps, both in regard to the treatment and character of his herd, to improve the quality of the milk.

SAMPLES NOD. A 3087, A 3088, A 3089 AND A 3090.

These formal samples taken at a dairy were found to contain small amounts of extraneous water, varying from 0.4 per cent. to 2.5 per cent. One of the samples appeared genuine on the basis of the Sale of Milk Regulations' presumptive standards, but when submitted to the freezing point test, it was shown to contain 0.4 per cent. of extraneous water. This authority could not obtain samples on delivery from the farmer, as the Salford dairyman himself accepts delivery at the farm, which is in the County area. The dairyman was therefore notified by letter of the results of the analysis and advised in his own interests to take the matter up with the farmer. At the same time the Inspector visited the farm and as a result requested the farmer to alter the airlock release on the milk cooler so that it would discharge outside the dairy. A further sample from this supply was genuine.

SAMPLES NOD. A 3313 AND A 3317.

The first of these samples represents an informal control sample taken from milk delivered to a City Institution. The other sample represents a formal sample of the same farmer's milk procured on delivery at the same Institution. Both samples were found to contain only 2.85 per cent. of butter fat, which corresponds to a deficiency of 5 per cent. when based on the presumptive minimum of 3 per cent. butter fat of the Sale of Milk Regulations, 1901. Further, milk supplied under contract to Institutions under your authority should comply with the specification requirement of 3.25 per cent. butter fat.



A strong letter of caution has been sent to the farmer concerned, drawing his attention to these deficiencies, which are solely due to inadequate mixing of the strippings with the bulk of the milk.

SAMPLES NOD. A 3379 AND 3380.

These are two informal samples of farmers' milk taken on delivery to a dairyman in this City. On analysis they gave the following figures :—Sample No. A 3379, 2·7 per cent. fat, 8·3 per cent. solids-not-fat, Freezing Point (Hortvet)  $-0\cdot517^{\circ}$  C. Sample No. A 3380, 3·1 per cent. fat, 8·2 per cent. solids-not-fat, Freezing Point (Hortvet)  $-0\cdot510^{\circ}$  C., corresponding on the minimum limits of the Sale of Milk Regulations, 1901, viz., 3·0 per cent. fat and 8·5 per cent. solids-not-fat, on the first sample to a deficiency of 10 per cent. butter fat and the presence of 2·4 per cent. extraneous water, and on the other sample to the presence of 3·5 per cent. of extraneous water. The freezing points of the samples also indicated the presence of 2·5 per cent. and 3·8 per cent. of extraneous water in the respective samples. In view of these results, the following samples of the whole of the farmer's supply were procured upon delivery the following day.

SAMPLES NOD. A 3389 TO A 3396 INCLUSIVE.

Of these eight formal samples, Nos. A 3389, A 3392, A 3394 and A 3396 appeared to be genuine. The remaining four samples had the following composition:—

Sample No. A 3390, 3·2 per cent. fat, 8·33 per cent. solids-not-fat, freezing point (Hortvet)  $-0\cdot524^{\circ}$  C.

Sample No. A 3391, 3·9 per cent. fat, 8·21 per cent. solids-not-fat, freezing point (Hortvet)  $-0\cdot523^{\circ}$  C.

Sample No. A 3393, 2·75 per cent. fat, 8·43 per cent. solids-not-fat, freezing point (Hortvet)  $-0\cdot524^{\circ}$  C.

Sample No. A 3395, 2·35 per cent. fat, 8·04 per cent. solids-not-fat, freezing point (Hortvet)  $-0\cdot499^{\circ}$  C.

Samples Nod. A 3390 and A 3391 therefore show the presence of at least 2·0 and 3·4 per cent. extraneous water respectively ; samples Nod. A 3393 and A 3395 show the presence of at least 0·8 and 5·4 per cent. extraneous water, and in addition, the original milks were deficient of 7·7 and 17·3 per cent. of butter fat respectively. In view of these results, "Appeal to Cow" samples were obtained through the County Authority, and these gave the analytical results shown in the following table.

TABLE 11.

No.	Total Solids.	Fat.	Solids-not-fat.	Freezing Point Hortvet Δ
2189.....	11·28	2·52	8·76	0·551
2190.....	11·69	2·70	8·99	0·553
2191.....	11·76	2·80	8·96	0·550
2192.....	12·13	3·35	8·78	0·555
2193.....	11·88	3·25	8·63	0·546
2194.....	12·22	3·20	9·02	0·553
2195.....	12·15	3·35	8·80	0·553
2196.....	12·50	3·75	8·75	0·551

The freezing points and solids-not-fat of these samples were all normal, but three of the samples showed low fat contents. It is, therefore apparent that, while the deficiency in fat is probably due to natural causes, the low solids-not-fat and freezing points figures in the formal samples can only be due to the presence of added water. Legal proceedings were instituted against this supplier, who was fined £15 on each summons, together with £6 6s. 0d. costs (£66 6s. 0d. in all). This was the defendant's third conviction within 15 months for the same type of offence.

SAMPLE No. A 3457.

This formal sample of milk, purchased from a milk bar, was found on analysis to contain only 2·35 per cent. of butter fat. On the basis of the minimum limit of 3·0 per cent. of butter fat fixed by the Sale of Milk Regulations, 1901, this represents a deficiency of 21·6 per cent. of milk fat. A sample taken on delivery from the wholesaler the following day was of genuine quality. As the deficiency found at least represents gross carelessness in stirring the milk on the part of the vendor, legal proceedings were instituted and the defendant was fined 10s. and £1 1s. 0d. costs.

SAMPLES NoD. A 3635, A 3642 AND A 3644.

The first of these was a formal sample of milk purchased from a shopkeeper which was found on analysis to contain only 1·60 per cent. butter fat, corresponding on the basis of the presumptive limit of 3 per cent. butter fat of the Sale of Milk Regulations, 1901, to a deficiency of 46·7 per cent. A further sample was taken from this shopkeeper the same day, No. A 3642, and was slightly deficient in that it contained a butter fat content of 2·9 per cent. Three samples of milk were then obtained from the farmer on delivery to this shop and one of these, No. A 3644, was also deficient, the fat figure being 2·8 per cent., while another, No. A 3645, which was part of the same consignment as No. A 3644 was very rich in butter fat, the percentage being 5·75. It is, therefore, probable that the deficiency in sample No. A 3635 was due to the inefficient mixing of this supply by the farmer before delivery to the shop. In view, however, of the slight nature of the deficiency in the samples taken from the farmer, it was felt that letters of caution to both the shopkeeper and the farmer would be adequate action.

SAMPLE No. A 3731.

This formal sample of milk was found on analysis to contain only 7·88 per cent. of solids-not-fat, corresponding on the presumptive limit of 8·5 per cent. of the Sale of Milk Regulations, 1901, to the presence of 7·3 per cent. of extraneous water. The freezing point of the sample also indicated the presence of 7·4 per cent. of added water. "Appeal to Cow" samples were obtained by the County Authority concerned on behalf of this department and these showed the results given in the following table.

TABLE 12.

No.	Total Solids.	Fat.	Solids-not-fat.	Freezing Point Hortvet △
M.D.A. 117.....	13·15	4·45	8·70	0·551
M.D.A. 117A .....	13·33	4·70	8·63	0·559
M.D.A. 118.....	11·98	3·35	8·63	0·544
M.D.A. 118A .....	12·14	3·55	8·59	0·544

The appeal samples were all of good quality, proceedings were therefore instituted against the vendor of this sample, who was fined £5 0s. 0d. and £4 9s. 2d. special costs.

SAMPLE No. A 3781.

This was a contract control sample taken at one of the City Institutions which was found on analysis to contain 2·95 per cent. butter fat; this represents a deficiency of only 1·7 per cent. when based on the presumptive minimum of 3 per cent. butter fat of the Sale of Milk Regulations, 1901. Milk supplied to Salford Institutions is required, however, by specification to contain at least 3·25 per cent. butter fat. The remaining two churns of the consignment, samples Nod. A 3782 and A 3783, gave fat figures of 4·1 per cent. and 3·8 per cent. respectively, giving an average figure for the whole supply of 3·6 per cent.; the deficiency in the sample under consideration is therefore almost certainly due to inefficient mixing. The farmer supplying the milk has been communicated with.

**Bottled Milk.**

It has been the practice of this department for several years now to pay particular attention to the sampling and analysis of milk which has been bottled before being offered for sale. This course has been adopted not because of any suggestion of deliberate tampering with the contents of the bottles, but because in the past several cases have occurred in which bottling has been carried out in a careless manner, particularly without due care being given to the stirring of the milk, with the result that the contents of some bottles have been deficient in butter fat. During the year the following six samples have been reported against, three with regard to their fat content: the deficiency being appreciable, however, in only one case.

SAMPLE No. A 3024.

This informal sample of bottled milk, purchased at a shop, was found on analysis to contain 2·9 per cent. of butter fat, corresponding to a deficiency of 3 per cent. The wholesale dairyman was sampled the following morning on delivery, and this sample was found to be of good quality, indicating that the deficiency in the first sample was probably due to inadequate stirring while bottling. The dairyman was advised to exercise greater care in this respect in the future.



## SAMPLE No. A 3085.

This formal sample of bottled milk was found on analysis to contain 8.34 per cent. of solids-not-fat, which corresponds, on the basis of the presumptive limit of 8.5 per cent. of the Sale of Milk Regulations, 1901, to the presence of 1.9 per cent. of extraneous water. The freezing point indicated the presence of at least 2.6 per cent. of extraneous water. Further samples of this supply were found to be genuine.

## SAMPLE No. A 3494.

This formal sample of bottled milk was found on analysis to contain only 8.42 per cent. solids-not-fat, against a minimum presumptive limit of 8.5 per cent. of the Sale of Milk Regulations, 1901, corresponding to the presence of 0.9 per cent. of extraneous water. This supply was again sampled the following day and was found to be genuine.

## SAMPLE No. A 3848.

This formal sample of bottled milk was found on analysis to contain only 2.7 per cent. butter fat, corresponding on the basis of the presumptive limit of the Sale of Milk Regulations, 1901, to a deficiency of 10 per cent. milk fat. The dairy firm supplying this shopkeeper was sampled on delivery the following day; of the two samples obtained one, No. A 3855, contained 3.0 per cent. fat, and the other, No. A 3856, contained 3.65 per cent. fat. Therefore, although both were of genuine quality there was considerable difference in their fat contents leading to the presumption that there was inefficient stirring of the bulk while bottling was in progress. A letter has been sent to the shopkeeper advising her in her own interests to take this matter up with her suppliers.

## SAMPLE No. A 4258.

This formal sample of bottled milk was found to contain 2.9 per cent. of butter fat, showing, therefore, a slight deficiency when compared against the 3.0 per cent. presumptive limit of the Sale of Milk Regulations, 1901. Further samples have been analysed from this supply and these were all genuine.

## SAMPLES NOD. A 4262, A 4266, A 4267, A 4268, A 4280, A 4281 AND A 4282.

The first of these samples was one of bottled milk, purchased from a shop, and found on analysis to contain 2.1 per cent. of extraneous water. Samples Nod. A 4266, A 4267 and A 4268 were then taken on delivery to the shop and were found to contain respectively 0.9 per cent., 1.5 per cent. and 0.7 per cent. of extraneous water. The remaining three samples were taken on delivery at the farmer's premises and were also found to contain respectively 0.8 per cent., 5.3 per cent. and 4.4 per cent. of extraneous water. The freezing points of all these samples (see Table 9) confirmed the presence of extraneous water (genuine milk should not freeze above  $-0.530^{\circ}$  C. Hortvet). While your Inspector was obtaining the last three samples at the farm he took the opportunity of inspecting the dairy equipment and he found that one of the rubber connections of the

water supply from the cooler was perforated due to constant wear and allowed a very fine spray of water to discharge into the back of the cooler, whenever the pressure of the water was altered. The rubber connection has been renewed and samples taken at a later date were found to be genuine and of good quality. In view of the relatively small amounts of extraneous water found, and as its presence was apparently accidental, a letter of caution to the farmer concerned was deemed sufficient action.

The following table shows the relative figures for pasteurised and non-pasteurised milk retailed in Salford during the year. These figures have now been included in the report for four years and it may be pointed out that on each occasion there has been a slightly higher figure for fat content in the non-pasteurised milk as compared with the pasteurised, just as farmers' milk shows the same effect when compared with milks from other sources.

The division of milks into pasteurised and non-pasteurised is based upon information supplied by the Sampling Officer.

TABLE 13.

AVERAGE COMPOSITION OF PASTEURISED AND NON-PASTEURISED MILK.

Month.	PASTEURISED.			NON-PASTEURISED.		
	Fat.	Solids-not-fat.	Total Solids.	Fat.	Solids-not-fat.	Total Solids.
January .....	3.56	8.81	12.37	3.54	8.79	12.33
February .....	3.48	8.77	12.25	3.90	8.93	12.83
March .....	3.44	8.82	12.26	3.49	8.86	12.35
April .....	3.33	8.74	12.07	3.57	8.90	12.47
May .....	3.41	8.79	12.20	3.58	8.96	12.54
June .....	3.41	8.83	12.24	3.87	8.88	12.75
July .....	3.51	8.84	12.35	4.24	8.70	12.94
August .....	3.55	8.81	12.36	3.74	8.87	12.61
September .....	3.53	8.87	12.40	4.10	8.96	13.06
October .....	3.72	8.91	12.63	3.66	8.86	12.52
November .....	3.69	8.78	12.47	3.87	8.83	12.70
December .....	3.62	8.76	12.38	3.77	8.89	12.66
Yearly Average..	3.54	8.81	12.35	3.77	8.85	12.62

TABLE 14.

ADULTERATED SAMPLES OTHER THAN MILK.

No.	Description.	Nature of Adulteration.	Remarks.
A 2985....	Margarine .....	16·5% of moisture .....	Manufacturers notified.
A 2989....	Tapioca.....	Unsatisfactory label.....	Packers interviewed.
A 3120....	Strawberry Jam .....	95 parts per million of sulphites.	Prosecution and conviction. £3 3s. 0d. costs.
A 3137....	Strawberry Jam .....	100 parts per million of sulphites.	
A 3135....	Glauber Salts.....	0·28% excess chlorides and consisted of glauher salts exsiccated.	Manufacturers notified.
A 3208 }	Eccles Cakes made with pure butter.	Fat deficient of 92·4% butter fat.	Prosecution and conviction. Fines of £7 10s. 0d. and £2 2s. 0d. costs.
A 3234 }		Fat deficient of 92·4% butter fat.	
A 3209....	Tinned Sild .....	3 grains per lb. of tin....	Stock surrendered for destruction.
A 3401 }	Eccles Cakes made with butter.	Fat deficient of 90% butter fat.	Manufacturers notified.
A 3413 }		Fat deficient of 75% butter fat.	
A 3404....	Iodine Paint Methy- lated.	Deficient 30% iodine....	Manufacturers interviewed.
A 3444....	Non-brewed Vinegar..	Deficient 4% of acetic acid.	Manufacturers notified.
A 3478....	Zinc Ointment B.P...	Base consisted of ben- zoated lard.	Stock replaced by manufacturers.
A 3531....	Blackcurrant Jam.....	55 parts per million of sulphites.	Manufacturers notified.
A 3577....	Shredded Beef Suet..	12·25% of rice flour without declaration.	Labelling offence.
A 3641....	Strawberry Jam .....	48 parts per million of sulphites.	Manufacturers notified.
A 3729....	Beef Sausage.....	70 parts per million of sulphites without declaration.	Caution.
A 3841....	Eccles Cakes made with butter.	Fat contained only 5% butter fat.	Manufacturers agreed to alter the label.
A 3872....	Glycerine .....	Contained only 92% glycerine.	Stock replaced by manufacturers.
A 3917....	Borax .....	Labelling offence.....	Manufacturers agreed to alter the label.
A 3944....	Potted Meat .....	Contained 7% starch....	Manufacturers cautioned.
A 3993 }	Eccles Cakes made with pure butter.	Fat deficient of 60% butter fat.	Prosecution and conviction. £4 4s. 0d. costs.
A 4104 }		Fat deficient of 60% butter fat.	
A 4021....	Chocolate Swiss Roll	Deficient 75% dry fat free cocoa.	Manufacturers inter- viewed.
A 4069....	Boracic Ointment.....	22% excess boric acid }	Manufacturers written.
A 4086....	Boracic Ointment.....	25% excess boric acid }	



TABLE 14—continued.

No.	Description.	Nature of Adulteration.	Remarks.
A 4071....	Lysol Ointment .....	Deficient 50% lysol.....	Firm liquidated.
A 4085....	Chocolate Swiss Roll	Deficient 100% dry fat free cocoa.	Manufacturers inter- viewed.
A 4093....	Bread and Butter.....	Fat deficient of 60% butter fat.	Prosecution and con- viction. Fined 20s.
A 4101....	Bread and Butter.....	Fat deficient of 94% butter fat.	
A 4105....	Stainless Iodine Ointment.	Deficient 51% iodine..	Prosecution and con- viction. Fines of 30s. and £2 12s. 6d. costs.
A 4162....	Stainless Iodine Ointment.	Deficient 58% iodine..	
A 4186....	Beef Sausage.....	Deficient 10% meat.....	Manufacturers written.
A 4236....	Rum and Butter Drops.	Contained no butter.....	Makers interviewed.
M 503....	Glycerin of Borax.....	Consisted 97% Glycer- ine of Phenol B.P.	Private purchaser.

Butter.

Eleven samples were examined during the year, all of which were found to be genuine. The moisture ranged from 13·0 to 15·8 per cent. ; the maximum permitted by law is 16·0 per cent.

Margarine.

Fifteen samples have been examined, 14 of which were returned as genuine ; the remaining sample, No. A 2985, contained 16·5 per cent. of moisture. As in the case of butter the statutory limit is 16·0 per cent. A letter was sent to the manufacturers indicating that the amount found was slightly excessive and an undertaking was given that greater supervision would be exercised in future.

Six of the above samples were sold in wrappers which stated that the margarine “ contains butter ” or was “ blended with butter.” The following table shows the amounts of moisture and butter actually present in these samples :—

Sample.	Moisture.	Butter.
	%	%
A 3345	14·1	5·0
A 3346	14·1	9·4
A 3347	14·5	9·1
A 3348	13·9	9·3
A 3349	14·3	4·2
A 4180	11·2	4·1

Section 6 (2) of the Food and Drugs (Adulteration) Act, 1928, prohibits the sale of any margarine the fat of which contains more than 10 per cent. of fat derived from milk (*i.e.*, butter fat). It will be observed that all the above

samples comply with this requirement and must therefore be passed as genuine. The labels and advertisements under which they are sold might, on the other hand, be taken by a purchaser not acquainted with the Act, as implying that a far more substantial amount of butter than 10 per cent. had been incorporated in the margarine. Three of the above samples do not even contain the full amount of butter permitted by the law, amounts of the order of only 4 to 5 per cent. being present. This department feels that labels ascribing a butter content to margarine should state definitely the proportion of butter present and at the time the Draft Bill of the 1938 Food and Drugs Act was under consideration, a suggestion to that effect was put forward by this authority and is now incorporated in the Act. Further reference to this matter will be found in the section of the report devoted to the Food and Drugs Act, 1938.

#### **Cream.**

Three samples of cream were examined during the year. These were reported as genuine; the butter fat contents ranged from 52 to 55 per cent. and all the samples were free from preservatives.

#### **Cheese.**

Seven samples were examined and all contained more than 45 per cent. of fat on the dry cheese and had therefore been manufactured from whole milk.

In the case of one sample, No. A 4142, purchased as full cream Cheshire cheese and which was found on analysis to contain 29.0 per cent. of fat and 44.8 per cent. of moisture, corresponding to 52.5 per cent. of fat on the dry matter of the cheese, enquiry by your Sampling Officer showed that the sample was a full cream cheese of Dutch origin. As there is no Marking Order under the Merchandise Marks Act, 1926, requiring cheese to be labelled, when sold by retail, with the country of origin and as it is acknowledged that Cheshire type cheese can be manufactured outside this country and further as this sample conformed to the standard of 45 per cent. fat on the dry cheese, no action could be taken against the vendor. This department, however, feels that this type of labelling conveys a wrong impression to the purchasing public as to the origin of the product. The matter has been taken up with the Cheshire Cheese Federation who, I understand, now propose to take joint action with other British cheese interests with a view to applying for a Marking Order.

#### **Lard, Suet and Cooking Fat.**

Four samples of lard have been examined and all were found to be genuine. Two samples of cooking fat were also genuine, one of these contained 7 per cent. moisture, a label indicating the presence of this amount being attached to the wrapper. All the samples of suet, six in number, consisted of shredded beef suet mixed with flour, and with one exception were labelled correctly. No. A 3577, however, bought loose as shredded beef suet, was found to contain 12.25 per cent. of rice flour, although no indication of the admixture was given on the

label displayed in the shop. The Sampling Officer visited the shopkeeper in question and explained to him the requirements of the Food and Drugs Act *re* the labelling of mixtures.

### **Bread and Butter.**

Six samples have been examined during the year and two were found to be adulterated. Samples Nod. A 4093 and A 4101 were informal and formal samples respectively purchased from the same cafe. The informal sample on analysis was found to contain only 40 per cent. butter in the fatty material spread on the bread. The formal sample taken the next day was "buttered" with a substance consisting of 94 per cent. margarine and 6 per cent. butter. Proceedings were instituted against the vendor of this sample, who was fined 20s.

### **Coffee.**

Three samples have been examined and all were found to consist of pure coffee.

One sample, No. A 4117, is interesting in that the label described it as digestive and quite different to anything already in use. On analysis, however, the following figures were obtained:—

	%
Moisture.....	1·05
Ash.....	4·26
Ash, soluble in water.....	3·15
Water soluble extract.....	26·20
Caffeine .....	0·89
Nitrogen.....	2·11
Ether extract.....	15·40

All these figures with the possible exception of the ether extract, which is slightly high, conform to those obtained from ordinary roasted coffee. No indication could be found of any abstraction or addition to the coffee which would justify the claims made on the label. The packers were communicated with and eventually agreed to remove all reference to the digestive and other reputed unique properties of the product.

### **Confectionery.**

#### **ECCLES CAKES.**

Nine samples have been examined during the year and seven of these were reported upon as adulterated. The offence in each case consisted of the use of a label bearing the words "these cakes are guaranteed to be made from pure butter," "guaranteed pure butter" or "made with pure butter," when the cakes actually contained only a proportion of butter mixed with pastry margarine. This department feels very strongly that labels worded in such a definite manner as the above should indicate that the fat used in making the cakes is all derived from butter. In cases where it is desired to do so, it is quite



possible to stress the presence of a proportion of butter mixed with other fats, without using a label which is misleading. It is apparent from a consideration of the results included in Table 14 that with this particular commodity at any rate, the form of label indicated above was becoming a "trade custom," which was very much to the prejudice of the purchaser. The manufacturers of one sample admitted at an interview that they knew the label was wrong, but as the result of unfair trade competition by firms using similar labels they had been forced to reduce their butter content. The vendors of sample No. A 3234, which contained only a very small proportion of butter, and of sample No. A 4104 were prosecuted and convictions obtained. Two of the Bakery Trade Associations in this district were also informed of the analytical results obtained and of the views of this department, and were requested to take the matter up with their members. The steps taken have resulted in the withdrawal of all misleading labels referring to the butter content of confectionery.

#### CHOCOLATE SWISS ROLL.

Four samples have been examined and two of these were adversely reported upon. Chocolate confectionery should be flavoured with a reasonable amount of genuine cocoa material and a minimum of 4 per cent. of dry fat free cocoa, corresponding to about 5.5 per cent. of ordinary cocoa powder is necessary to comply with this requirement. This standard has already been adopted by several other Local Authorities and was originally suggested by the British Research Association for the sugar, etc., confectionery trades. On this basis, sample No. A 4021 was found to be deficient of 75 per cent. of dry fat free cocoa, while Sample No. A 4085 was entirely devoid of cocoa material. The makers of both these cakes have been interviewed and have agreed to prepare their chocolate confectionery in future in accordance with the above standard. Letters have also been sent to the Local Trade Associations drawing their attention to this matter.

#### SWEETS AND CHOCOLATE.

Two samples of sweets and one of chocolate have been examined, one sample of sweets and the sample of chocolate being genuine.

#### RUM AND BUTTER DROPS, SAMPLE NO. A 4236.

This informal sample was found on analysis to be entirely devoid of butter. The makers were interviewed and they stated that the sweets were made from a formula in which a preparation called "butter essence" was used; they had assumed that this essence was made from butter and its use therefore justified the word "butter" being applied to the sweets. The makers of the essence have since stated that it is an artificial product, confirming therefore the findings of this laboratory. The manufacturers have agreed to discontinue using labels bearing the word "butter."

#### Jam.

Nineteen samples have been examined and four were found to be adulterated. The presence of sulphite preservative, in excess of the 40 parts per million allowed in jam by the Public Health (Preservatives, &c. in Food) Regulations,

1925, was the offence in each case. In the case of two of the samples, No A 3531, Blackcurrant Jam, and No. A 3641, Strawberry Jam, the amounts found were 55 and 48 parts per million respectively, figures which can only be considered slightly excessive, particularly in the former case as it is acknowledged that blackcurrants preserved in sulphite pickle very tenaciously retain a portion of the sulphur dioxide throughout the jam making process.

#### STRAWBERRY JAM, SAMPLES NOD. A 3120 AND A 3137.

These were informal and formal samples respectively of the same make of jam and were found on analysis to contain sulphite preservative amounting to 95 and 100 parts per million of sulphur dioxide respectively. The formal sample, therefore, contained sulphites to the extent of 60 parts per million in excess of the permitted limit. There are no mitigating circumstances to warrant the presence of an excess of this nature in strawberry jam, and proceedings were instituted against the manufacturers for applying a false warranty. The Stipendiary Magistrate intimated that the defendants had not taken all reasonable precautions in the manufacture of the jam, but in view of their previous good record, he dismissed the summons on payment of £3 3s. 0d. costs.

#### Tapioca.

Of the three samples examined during the year, one was returned as having an unsatisfactory label. The container of Sample No. A 2989 bore the words—"Tapioca, usually called 'fine sago,'" in which, although the sample consisted of genuine tapioca, the words "fine sago" were in very much bolder type than the word "tapioca." While a lenient view is usually adopted where sago and tapioca are sold for each other by shopkeepers, it was felt that the packers of this article, by using a label in this form, were going out of their way to encourage substitution. At an interview it was agreed that future labels would bear the word "tapioca" in bold letters.

#### Sausage.

Six samples have been examined during the year of which number two samples were reported as adulterated.

#### BEEF SAUSAGE, SAMPLE NO. A 3729.

This informal sample was found to contain 70 parts per million of sulphite preservative expressed as sulphur dioxide. The Public Health (Preservatives, &c. in Food) Regulations, 1925, only permit sulphur dioxide in sausage when a written declaration of its presence is exhibited, the amount then allowed being 450 parts per million. No declaration of the presence of preservative was on view when this sausage was purchased. In view of the relatively small amount of preservative present your Inspector cautioned the shopkeeper and explained to him the requirements of the regulations.

## BEEF SAUSAGE, SAMPLE NO. A 4186.

This formal sample was found on analysis to contain only 45 per cent. of total meat. Under the Meat Rationing Order of 1918—now obsolete—no sausage was allowed to be retailed which contained less than 50 per cent. meat. Although this order no longer operates it has become the practice for sausage manufacturers to adhere to this standard, and in several districts successful prosecutions have been instituted where the meat content has been appreciably below 50 per cent. Accordingly, the vendor of this sample was communicated with and informed that this department considers a 50 per cent. meat content a minimum standard for sausage, with a request that this should be adhered to in future.

**Potted Meat.**

Two samples have been examined, one of which was unsatisfactory.

## SAMPLE NO. A 3944.

This informal sample was found on analysis to contain 7 per cent. of starch filler. It is the opinion of this department that the expression "potted meat" implies a pure article and that it should therefore consist only of meat and the necessary seasoning. Where it is intended to offer for sale a mixed article consisting of meat and a small proportion of cereal filler an expression such as "meat paste" should be used. The vendor of this sample has been informed of these views.

**Tinned Foods.**

Twenty-one samples, including tomatoes, fruit, baked beans, meat and fish have been examined during the year, and with one exception they all proved to be satisfactory.

## TINNED SILD IN OLIVE OIL, SAMPLE NO. A 3209.

The contents of this informal sample were found on analysis to contain the equivalent of three grains per pound of tin. This amount is in excess of the maximum limit of two grains per pound suggested in a report, dated 1908, to the Local Government Board by Drs. Buchanan and Schryver; their experiments having proved that in amounts greater than this, there is direct evidence of the accumulation of the metal in the body.

The shopkeeper's stock of 105 tins was surrendered to this department and destroyed, and the Port Medical Officer at the port of entry was advised of the findings of this department.

**DRUGS.****Glauber's Salts.**

Three samples have been examined during the year and one was regarded as unsatisfactory.



## SAMPLE NO. A 3135.

On analysis this informal sample was found to consist of exsiccated Glauber's Salts and it also contained traces of chloride in excess of the limit of the British Pharmaceutical Codex, the permitted limit being 0.12 per cent. as sodium chloride, whereas the sample was found to contain 0.40 per cent. It is important that Drugs used for medicinal purposes should conform to the recognised standards of the British Pharmacopœia and the British Pharmaceutical Codex and the drug asked for and not a modification of it should be supplied to the customer. In this case for example the dose of the exsiccated salt is only half that of the ordinary crystalline salt. A letter embodying the analytical results and a request that greater care be exercised in future, was sent to the vendor of the sample.

**Iodine Preparations.**

One sample of iodine paint and three samples of stainless iodine ointment were examined during the year. One sample of stainless iodine ointment was genuine.

## IODINE PAINT, METHYLATED, SAMPLE NO. A 3404.

This sample was found to contain 1.4 per cent. of iodine. Tincture of Iodine B.P. contains 2.5 per cent. iodine and the Factory and Workshops First Aid Order stipulates that a solution containing at least 2.0 per cent. of iodine in alcohol shall be provided. On the basis of the lower of these standards, the sample in question was deficient of 30 per cent. of iodine. The manufacturers have been interviewed and at first were at some loss to account for the deficiency, as they were using ingredients calculated to give a content of 2.25 per cent. of iodine. It transpired, however, that inaccurate measurement and loss due to heating were responsible for the low iodine content.

## STAINLESS IODINE OINTMENT, SAMPLES NOD. A 4105 AND A 4162.

These are informal and formal samples of the same brand of ointment. The first was found to contain 2.45 per cent. of total iodine, while the formal sample contained 2.1 per cent. The question of stainless iodine ointment was discussed at some length in last year's report and it will therefore be sufficient to state here that the only recognised formularies, in which this substance is mentioned, are the British Pharmaceutical Codex and the National Health Insurance Formulary, both of which stipulate that 5 per cent. of iodine shall be used in its preparation. On these standards the samples in question were therefore deficient of 51 per cent. and 58 per cent. of iodine respectively. Proceedings were instituted against the vendor and manufacturers of the formal sample, the retailer being fined 10s. and the manufacturers 20s. and £2 12s. 6d. costs.

**Glycerine.**

Five samples have been examined and one of these was unsatisfactory.

## SAMPLE No. A 3872.

This informal sample consisted of two prepacked bottles of glycerine, one of which had a slight yellow colour and was therefore analysed separately. Its specific gravity at 15.5° C. was 1.246 and its refractive index at 20° C. was 1.4565. These figures are outside the British Pharmacopœial range and only correspond to a glycerine of 92 per cent. strength, instead of at least 98 per cent. The other bottle was genuine. The packers were communicated with and in reply they stated that this particular stock had been despatched from the works over a year ago and they considered any deterioration might be due to inefficient sealing of the bottles; they agreed, however, to replace the shopkeeper's stock.

**Borax.**

Six samples have been analysed; one of these was labelled in an unsatisfactory manner.

## SAMPLE No. A 3917.

This informal sample of prepacked borax was found to be of B.P. quality. A portion of the printed wrapper, however, made reference to borax as a preservative for certain foods. This is a direct contravention of the Public Health (Preservatives, &c. in Food) Regulations, 1925, subsections 5—(1) and 5—(2), of which prohibit the recommendation of products such as borax as preservatives for food. On the attention of the packers being drawn to this irregularity they agreed to immediately obliterate the printing from the wrappers.

**Boracic Ointment.**

Seven samples have been examined and two of these, both the product of the same manufacturers, were unsatisfactory.

## SAMPLES NoD. A 4069 AND A 4086.

These informal samples labelled B.P. contained 12.2 per cent. and 12.5 per cent. of boric acid against the B.P. standard of 10 per cent. These figures correspond to excesses of 22 per cent. and 25 per cent. respectively and can only be due to carelessness in manufacture. The firm were accordingly communicated with and in reply agreed to exercise more supervision in future.

**Glycerin of Borax.**

Five samples were examined and one of these, which was submitted by a private purchaser, was adulterated.

## SAMPLE No. M 503.

This sample, purchased from a pharmacist, was found on analysis to contain 15.5 per cent. of phenol in glycerin. Glycerin of phenol B.P. contains 16 per cent. of phenol and this substance had apparently been supplied in error for

glycerin of borax by the shop assistant. In view of the fact that the sample was purchased about a month before it was submitted for analysis and that in the meantime the purchaser visited the shop to make a complaint, it is not surprising that a further sample taken by the Sampling Officer was found to be genuine. It cannot be too strongly emphasised that in cases where a member of the purchasing public wishes this department to investigate a complaint relating to the purchase of a food or drug, it is essential to success that he should notify the department as early as possible, and he should on no account warn the vendor that he intends to take this step.

### **The Food and Drugs Act, 1938.**

The year under review has seen the passing into law of the Food and Drugs Act, 1938, which will come into force on the 1st October, 1939. This Act, together with the Local Government Act, 1933, and the Public Health Act, 1936, are the results of the work of the Local Government and Public Health Consolidation Committee, which was appointed in 1930 to examine, with a view to consolidation and amendment, the existing enactments relating to Local Government and to Public Health.

In order to give some idea of the comprehensive scope of the new Food and Drugs Act, it may be pointed out that it embodies provisions from some 29 Acts dating from the 16th century and it also incorporates some of the alterations of the law recommended by other Committees; from the point of view of Public Analysts, the most notable of these being the recommendations made in the report presented in April, 1934, by the Departmental Committee on the Composition and Description of Food.

The Act consolidates, with amendments, certain enactments relating to food, drugs, markets, slaughterhouses, knackers' yards, it is composed of VI Parts divided into 103 Sections, and it also contains four Schedules. Parts I, II, III and Part VI all have direct bearing on the duties of the Public Analyst, while Part V deals with the powers of Local Authorities with regard to markets, slaughterhouses, knackers' yards and cold-air stores.

Part IV deals with the importation of food and will be enforced by the Commissioners of Customs and Excise.

It is now proposed to give a short account of those parts of the Act which concern Public Analysts and particularly to note any amendments which facilitate their work.

Section 1 makes it an offence to add any substance which will render a food injurious to health, or which will affect the quality or potency of a drug. This is broadly the reproduction of Section 1 of the 1928 Food and Drugs (Adulteration) Act, except that the expression "mix, colour, stain or powder"



has been replaced by the much simpler phrase "add any substance" and the proviso contained in the old section has been omitted as the terms of the new warranty defence make it redundant. Section 2 deals with the abstraction of any constituent from a food without due notice being given to the purchaser, and subsection (b), which is new law, makes abstraction an offence, even with notice, if the food so treated does not comply with its composition as stated in regulations made under the Act.

Section 3 prohibits the sale of any food or drug "which is not of the nature, or not of the substance, or not of the quality" of that demanded by the purchaser and is a reproduction of Section 2 of the 1928 Act. Section 4 deals with defences to the last Section; Subsection 4 (2) is new law, and states the defence possible in prosecutions arising from the alleged abstraction of a constituent from a food or drug, whereby the food is rendered injurious to health, or from abstraction alleged fraudulently to conceal its inferior quality; cases arising out of this subsection are likely to be rare, but are, nevertheless, quite possible. Section 5 states that the label attached to an article must state explicitly what substance has been added to or abstracted from the food or drug, and further it must be of adequate size, with the notice legibly printed and conspicuously visible. The wording of this section has been altered from that of the corresponding section 4 (2) of the 1928 Act in order to cope with that type of evasion, in which the notice is printed in such a manner as to be unlikely to catch the eye of the customer. Section 6 (1) reproduces the Part of Section 30 (1) of the 1928 Act dealing with false labels and has been reworded in such a manner as to include "misleading" as well as obviously false labels. Subsection 6 (2) is new law and relates to the publishing of false or misleading advertisements as distinct from the actual label on the package. In the past it has not been possible to couple the wording of newspaper, etc., advertisements with samples bought as a result of the advertisements and this subsection has been introduced specifically for this purpose. A most important point is that the onus is placed on the manufacturer of the food or drug to prove that he was not responsible for the publication of the advertisement. This subsection has been introduced as one of the recommendations of the Report of the Departmental Committee on the Composition and Description of Food. The recommendations of that Committee have also been followed in Section 8 of the new Act, which deals with Regulations as to food (except milk) and is a reproduction of the Public Health (Regulations as to Food) Act, 1907, but whereas regulations under the 1907 Act have only been made with regard to a few substances, such as dried and condensed milk, and then only with a view to preventing danger to health, they can now be extended to cover all foods and for all purposes where the protection of the purchaser may be necessary.

Section 20 authorises the Minister of Health to make Milk and Dairies Regulations for a number of purposes including the registration, inspection and cleansing of dairies, the distribution, labelling and importation of milk, and, unless no express provision is made elsewhere in the Act under subsection (1) (j), regulations can be made for prohibiting or restricting the addition of any

substance to, or the abstraction of any constituent from, milk. Section 23 empowers the Minister of Agriculture and Fisheries to make regulations for determining what deficiency in any of the normal constituents of milk, or what proportion of water in a sample shall raise a presumption, until the contrary is proved, that the sample is not genuine milk. It should be noted that any standards embodied in regulations made under this section, as in the case of those of the Sale of Milk Regulations, 1901, at present in force, would be presumptive and not absolute standards and could therefore be contested in legal proceedings.

Section 24 prohibits the addition of water, colouring matter, dried milk, etc. to milk and is a reproduction of Section 4 of the Milk Act of 1922; a notable addition is, however, the prohibition of the sale of mixtures of cream and separated milk as milk, either alone or mixed with unseparated milk, a practice which under certain conditions of the market might seriously affect the interests of honest dealers.

Sections 27, 28 and 29 relate to artificial cream and reproduce in all their essentials the Artificial Cream Act, 1929. It is perhaps to be regretted that advantage was not taken of the opportunity provided by the passing of the new Act, to replace the words "Artificial Cream" by the words "Reconstituted Cream," which would appear to be a more suitable name for a product prepared from constituents of milk by the mere addition of water. True "synthetic" cream, *i.e.*, cream made from fats other than butter fat, might also advantageously have been specifically included in the Act, either in the sections devoted to "Artificial Cream," or in those devoted to Margarine, etc. Synthetic cream has come very much to the fore in recent years and as it bears exactly the same relationship to genuine cream that margarine bears to butter, your Analyst feels that it should be produced and sold under similar conditions.

Sections 30 and 31 are devoted to bread and flour and are drafted on the lines of the recommendations of the 1934 report of the Departmental Committee on the Composition and Description of Food, and the 1927 report of a Departmental Committee which sat to consider "whether, and to what extent, the practice of treating flour with chemical substances is objectionable on grounds of health, and whether it is desirable in the interests of the public health that the practice should be prohibited or restricted and, in the latter case, what restrictions should be imposed." The question of improvers in flour is a very controversial one, and although ample scope is given in Section 30 for almost any degree of control, it is impossible to state at this juncture what regulations will be considered advisable.

Sections 32, 33, 34, 35 and 36 relate to margarine, margarine-cheese, butter and milk-blended butter and are reproduced in the main from similar sections in the Food and Drugs (Adulteration) Act, 1928. Notable changes are, firstly,



the standard of 16 per cent. water in butter and margarine has been made an absolute one, whereas formerly it only applied to butter and margarine in, or consigned from, a butter or margarine factory. In cases where labels and advertisements relating to margarine state that it contains butter they will also, in future, be required to state the percentage of butter present. This subsection to Section 32 was not included in the Draft Bill but was included in the Act as the result of representations made by this authority and other bodies drawing attention to the practice of issuing advertisements and labels which, read by people not conversant with the statutory 10 per cent. limit of butter fat in margarine fat, might be taken to imply that the margarine contained very substantial amounts of butter.

Section 64 defines " Food and Drugs Authority " and the basis of the definition is that in non-county boroughs of less than 40,000, or in special cases of less than 20,000 inhabitants, the Act will in future be administered by the County Council. The ultimate result will be to slightly increase the number of Food and Drug Authorities in the country. Section 67 authorises facilities for bacteriological or other examinations of food and drugs and is complementary to Section 68 (1) and to Section 69 (1) which last provides that " if a sampling officer who has procured a sample of any food or drug considers that it should be analysed, he shall submit it to be analysed by the Public Analyst. . . . " In other words, it is no longer necessary to submit to chemical analysis an article of food, if some other form of examination would be more appropriate to determine its nature and composition, but on the other hand if chemical analysis is necessary, it must be carried out by the Public Analyst.

Section 68 relates to powers of sampling. Subsection (3) (b) is new in that a sampling officer may now take samples of any food found on premises which he has entered in the execution of his duty. Subsection (5) allows for samples of milk, taken by one authority at the request of another, to be sent direct to the Public Analyst instead of to the person who made the request, thereby saving valuable time in the analysis of a perishable article. Subsection (6) is a most valuable addition to the powers of sampling in that it provides a means by which the sampling officer of one authority can take samples of milk in the area of another authority, whereby a considerable saving in expense and time will be effected. This should be most valuable in the case of " follow up " and " Appeal to Cow " samples and will eliminate the time factor, which is often pleaded by the defence in cases where " Appeal to Cow " samples are of good quality but are taken two or three days after adulterated formal samples. Although subsection (7) allows samples of any food to be taken on delivery, it should be noted that the same procedure is not extended to include the taking of samples of drugs on delivery.

Section 69 concerns the right to have samples analysed and subsection (3) provides that a fee not exceeding one guinea may be demanded in advance by the analyst in the case of a sample submitted by a person not an officer of the



Food and Drugs Authority. A fee of even one guinea will not be adequate payment for the work involved in examining the more complex types of food and drugs, but it is a decidedly more reasonable figure than that of 10s. 6d., which has been the statutory fee since the year 1875. It should be noted that while one guinea is the maximum fee allowed for an analysis, justifiable complaints with regard to food and drugs are thoroughly investigated by this department without any payment being necessary.

Section 70 prescribes the manner in which samples of food and drugs shall be divided and dealt with, subsection (3) being new in that it provides for the taking of samples from automatic machines.

Section 78 deals with penalties for obstructing a person acting in the execution of the Act and an attempt has been made to differentiate between obstruction of the ordinary kind, and obstruction in a case where the court is satisfied that it was aimed at preventing discovery of a major offence carrying with it the liability to a heavy fine. The fine for the first type of offence will not exceed £5, but in the case of the more serious offence a fine not exceeding £20 or one month's imprisonment may be imposed.

With regard to penalties under the Act other than the above, Section 79 provides in the case of a first offence for a fine not exceeding £20 and in the case of a subsequent offence for a fine not exceeding £100 or three months' imprisonment, or both. This represents a very considerable simplification of the present law, which describes different penalties for offences, depending on whether action is taken under the 1928 Act, the Public Health (Regulations as to Food) Act, 1907, or the Milk Act, 1915, etc.

Prosecutions are governed by Section 80, in which the present restriction requiring proceedings to be instituted within 28 days from the time the sample was procured is retained, but with the provision that in exceptional circumstances permission may be granted to extend the period to not more than 42 days. The time within which proceedings may be commenced under Section 85 in respect of the giving of a false warranty has been increased to twelve months instead of six months. This change is due to the fact that stocks for which warranties are given are frequently kept in retail shops for periods longer than six months, and if an offence is then discovered it is impossible, under the present law, to take proceedings against the warrantor.

Section 83 permits a defendant, on giving the prosecutor not less than three clear days' notice, to have any other person, by whose act he alleges the contravention of the provisions in question was due, brought before the court in

the proceedings, and permits the defendant, or the other persons, or both, being convicted of the offence. This section is based on somewhat similar provisions in the Milk Acts of 1915 and 1922 and the Act of 1928. Subsection (3) is particularly important in that it will enable an authority on being reasonably satisfied that the first mentioned person could establish a defence such as the one mentioned above, to charge and obtain a conviction against the second person, without causing proceedings to be taken against the first person.

Section 84 deals with the condition under which a warranty may be pleaded as defence and is a reproduction with amendment of Section 29 of the Act of 1928. In this latter Act the position is somewhat ambiguous in that under subsection 29 (1) (a), in a prosecution for "dealing with, selling, exposing or offering for sale, or having in his possession for sale margarine, margarine-cheese or milk-blended butter" the defendant is to be discharged if he proves that he had purchased the article as butter or cheese, with a written warranty or *invoice* to that effect; whereas 29 (1) (b) covers articles of all kinds but is limited to the offence of selling and makes no references to invoices, but otherwise entitles the defendant to be discharged if he possesses a written warranty that he purchased the article as the same in nature, substance and quality as that demanded of him. The Departmental Committee on the Composition and Description of Food recommended that this inequality should be removed and that invoices should be equivalent to warranties for all articles; accordingly Section 84 (5) of the new act puts invoices and warranties on the same footing and makes the warranty defence available for all prosecutions under the Act relating to the sale, or offering or exposing for sale, or having in possession for sale of any food or drug.

Sections 87 to 90 concern appeals, and Section 90 in particular is important in that it stipulates the conditions under which a business may be continued while an appeal is pending. Section 2 of the Milk Act of 1922 which is the existing law relating to the same point with regard to refusal of registration of milk purveyors and dairies is somewhat loosely worded and cases have occurred where its provisions have been abused. The wording of Section 90 of the new Act has therefore been amended to render abuse more difficult, but at the same time to safeguard the rights of *bona fide* trades people.

The third Schedule to the Act is of importance to the Public Analyst and Sampling Officer in that it contains special provisions as to the sampling of milk. It does not, however, represent new law as it is a practically complete reproduction of the second Schedule of the 1928 Act. The second paragraph of Section (7) of the third Schedule provides that where samples are taken at a corresponding milking direct from the cows the person procuring the samples shall be satisfied that they are fair samples of the milk of the cows "when properly and fully milked." This proviso is obviously important and yet it is only definitely laid down in current legislation relating to milking carried out

with a view to the taking of "Appeal to Cow" samples. It is hoped that in any regulations made under Section 20 (1) (j) or Section 23 (1) this proviso will be included and will apply to all milk intended for human consumption.

In conclusion, it will be seen that much has been done towards the simplification and consolidation of existing Food Laws and in several cases anomalies, which have crept in as the result of the former practice of framing acts relating to specific articles of food, have been removed. The real merit of the Act, however, lies, in the opinion of your analyst, in the provision included, particularly in Section 8, for the making of regulations governing practically every conceivable stage in the production, distribution and sale of all foodstuffs, and its success will ultimately depend on the use which is made of the facilities it provides for this purpose. In particular, the making of regulations governing the composition of foodstuffs will go a long way to guaranteeing to the general public the genuineness of the article purchased and, in addition, will clarify the position with regard to many foodstuffs from the point of view of both the manufacturer and the Public Analyst.

MISCELLANEOUS SAMPLES.

Contract Samples.....	296
Miscellaneous Health Department.....	61
Waters .....	27
Police .....	7
Parks Department.....	1
Own Information.....	16
Other Local Authorities, etc. ....	12
Soot Gauges .....	48
Sulphur Dioxide (lead peroxide) .....	24
Swimming Bath Waters.....	221
	713
Sulphur Dioxide (volumetric method, daily tests)	250
Sunlight Tests .....	2,187
	3,150



## CONTRACT SAMPLES.

Soap—Laundry .....	4
Pale .....	4
White Windsor .....	4
Carbolic .....	4
Soft .....	3
Liquid .....	7
Flakes .....	6
Powder .....	6
Scouring Tablets .....	4
Scouring Powders .....	7
Liquid Metal Polish .....	7
Metal Paste.....	5
Turpentine Substitute.....	15
Floor Sweeping Compound .....	3
Jams and Marmalade.....	105
Cocoa .....	7
Margarine .....	18
Cheese .....	14
Lard .....	6
Sausage .....	20
Meat Extract .....	6
Floor Polish .....	6
Furniture Cream .....	3
Lysol .....	3
Whiskey.....	8
Brandy.....	8
Butter .....	1
Drugs.....	12
	—
	296
	—

Included in the above list are 50 samples taken as contract control samples from Institutions in this City during the year; of these, two samples of floor polish and 12 samples of jam were reported upon adversely and the contractors communicated with.

The above list of contract samples is composed of commodities used chiefly by the Health Department and City Institutions and which are purchased by the Central Purchasing Committee. Practically all these samples are examined with a view to determining whether they are in accordance with specifications prepared by this Department. In this way the quality of the article submitted is ascertained, and future deliveries can be readily checked. Specifications and detailed methods of scientific testing such as those of the British Standard Specifications, British Pharmacopœia, and the standard methods for testing

petroleum, tar, etc., are now generally recognised by manufacturers and traders as the foundations on which contracts for the sale of their products are based. This laboratory is available for the examination of all commodities purchased under these conditions and there is no doubt that the City would benefit by the increased control which would thereby be exercised.

#### MISCELLANEOUS HEALTH DEPARTMENT SAMPLES.

These included condensed and human milks, bread, cake, sugar, stock for soup, non-slip floor polish, vegetation for examination for lead contamination, slippers alleged to have caused dermatitis, tinned baked beans, calf's and lamb's liver, etc., etc.

The tinned baked beans are worthy of mention in that as the result of a complaint seven samples of the same brand, purchased from the same shop, were all found on analysis to contain excessive amounts of tin, varying in amount from 2·9 to 5·0 grains per pound. Two grains of tin per pound is the maximum amount usually permitted in foodstuffs. The remainder of the shop-keeper's stock of 124 tins was surrendered to this department and destroyed. The packers were communicated with and they were able to demonstrate that the action on the tin lining was probably due to an unusual excess of nitrate in the cured pork packed with the beans, a source of trouble which will be very carefully avoided in future. This particular consignment was packed less than a year before the date of analysis.

The samples of calf's and lamb's liver both purchased from the same shop and submitted on complaint were found upon examination to consist entirely of pig's liver. The butcher from whom these two samples were purchased has been written to and cautioned with regard to the substitution of one article for another without disclosure to the purchaser.

#### POLICE SAMPLES.

The most interesting of these were a pair of gloves and a pair of boots submitted as exhibits in a case of arson; both gloves and boots were found to be contaminated with light lubricating oil and green paint identical in composition with oil and paint found at the site of the fire.

#### Swimming Bath Waters.

The use of swimming baths has increased greatly in recent years. In order that available facilities should be used to the best advantage, the Ministry of Health in 1929 published a report on the "Purification of the Water of Swimming Baths." This report contains certain practical suggestions for the guidance of Local Authorities, which may be summarised as follows :—

For indoor baths, it is recommended that filtration should be continuous by pressure filters, with a "turnover" period for the whole of the water in the baths of not more than four hours. In order that rapid filtration should be

effective, it is necessary to add a "coagulant," that is, an aluminium compound with the necessary alkaline salt to form a flocculent and retentive precipitate of aluminium hydrate, which prevents solid particles and some of the bacteria from passing through the filters. After filtration, the clear liquid is heated, aerated and chlorinated by means of chlorine gas or chloramine. The water then entering the bath should comply with the following chemical guarantees :—

1. The water issuing from the plant shall contain not more than 0·5 parts and not less than 0·2 parts per million of free chlorine.
2. Be definitely alkaline to methyl orange, but free from caustic alkalinity.
3. Be of a clarity so that a 19 S.W.G. platinum wire can be seen through a depth of six feet.
4. Fully aerated, sparkling and attractive in appearance.

Provided that the bath is not hopelessly overcrowded, the bacterial purity will then be approximately the same as that of drinking water. It is pointed out that the maintenance of an alkaline condition is important to neutralise the acid continually formed from the alumina and chlorine, which often causes complaints of smarting eyes, often wrongly attributed to the presence of excess chlorine. A pH value between 7·0 and 8·0 will be adequate protection in this respect.

Two hundred and ten samples of swimming bath water were examined during the year, all the baths in use being tested at least once a week during the period extending from the beginning of May to the end of September and at less frequent intervals during the winter. Out of the total number of samples examined, 58 showed slight variations from the standards for free chlorine and alkalinity indicated above. Three samples showed a free chlorine content of over one part per million and one sample was entirely devoid of free chlorine. The divergencies in the last four cases were at once brought to the notice of the Baths Superintendent. On no occasion was the divergence found sufficient to cause noticeable inconvenience to the bathers.

### City Waters.

Salford obtains its water supply from gathering grounds under the control of the Manchester Corporation. Samples have been taken for analysis each month at two points in this City, one from a tap in Regent Road and the other from a tap in Durham Road, Pendleton. The average results for the year are given in the following table and it will be seen that the water in both districts possesses very little hardness and is of satisfactory chemical purity. Traces of free chlorine were detected in the samples taken at Regent Road on seven occasions during the year.



TABLE 15.

	PARTS PER 100,000.	
	Durham Road, Pendleton.	Regent Road, Salford.
Total Solid Matter .....	4.42	8.66
Nitrates (as N <sub>2</sub> ).....	0.01	0.08
Nitrites (as N <sub>2</sub> ) .....	Nil.	Nil.
Combined Chlorine .....	0.75	1.15
Free and Saline Ammonia (as N <sub>2</sub> ) .....	Nil.	0.0015
Albuminoid Ammonia (as N <sub>2</sub> ) .....	0.002	0.003
Oxygen absorbed from acid } 15 mins. ....	0.027	0.024
permanganate } 3 hrs.....	0.057	0.051
Temporary Hardness .....	1.3	0.6
Total Hardness .....	2.5	3.9
pH Value .....	8.9	7.0

Fertilisers and Feeding Stuffs Act, 1926.

Twelve samples have been examined, of which five were fertilisers and seven were feeding stuffs. Only three samples were entirely satisfactory. Two samples of fertilisers and five samples of feeding stuffs showed variations from the declared statutory statements in excess of the permitted limits, and in the case of one of these samples, the particulars in the statutory statement did not agree with the definition of the substance in the 4th Schedule to the Act. The statutory statement relating to a fertiliser did not contain all the particulars required by the 1st Schedule to the Act. One feeding stuff was adulterated by the addition of a foreign ingredient. In no case was the presence of any injurious substance detected. In all cases where variations were found, they were brought to the notice of the manufacturers concerned and, in the case of the adulterated sample, information was also conveyed to the Medical Officer of Health of the Authority in whose district the substance was manufactured, in order that the matter might be further investigated.

Appended is a list of the unsatisfactory samples, together with the variations found :—

A 3095	Sulphate of Ammonia.....	No declaration of acidity in statutory statement.
A 3098	Garden Fertiliser .....	Soluble phosphoric acid, found 7.05 per cent., declared 6.00 per cent. Potash, found 7.40 per cent., declared 8.50 per cent.
A 3099	Tomato Fertiliser.....	Soluble phosphoric acid, found 6.63 per cent., declared 5.72 per cent.
A 3791	Fish Meal .....	Oil, found 1.45 per cent., declared 3.0 per cent. Salt, found 1.5 per cent., declared 3.0 per cent.

A 3792	Laying Meal .....	Oil, found 3·6 per cent., declared 2·42 per cent. Albuminoids (protein), found 18·9 per cent., declared 15·5 per cent.
A 3793	Meat and Bone Meal.....	Oil, found 12·0 per cent., declared 7·81 per cent. Albuminoids (protein), found 51·6 per cent., declared 38·85 per cent. Phosphoric acid, found 11·5 per cent., declared 14·00 per cent.
A 3795	Flaked Maize .....	Oil, found 2·2 per cent., declared 3·75 per cent.
A 3796	Chicken Mash.....	Fibre, found 5·0 per cent., declared 9·0 per cent.
A 4161	Ground Dried Yeast.....	Contained 15 per cent. of finely ground biscuit.

#### **Rag Flock Act, 1911-1928.**

Three samples of flock have been examined during the year. Of these, one consisted of rag flock as defined by the Act and was genuine. The other two samples consisted of cotton and wool screenings respectively and were therefore exempt from the Rag Flock Regulations. It may be mentioned that the latter samples contained 90 and 37 parts respectively of chloride per 100,000 ; against a maximum permitted limit in rag flock of 30 parts of chloride per 100,000.

#### **MERCHANDISE MARKS ACT, 1926.**

##### **Imported Goods Marking Orders.**

The labelling requirements of the Act have been carefully carried out by the majority of shopkeepers, only 14 cautions being necessary for various infringements of the Marking Orders. No prosecutions have been instituted during the year.

#### **Pharmacy and Poisons Act, 1933.**

One hundred and fifty-nine shopkeepers were registered by this authority during the year as sellers of Part II poisons, against 168 last year and 173 in 1936. This number was composed of 153 renewals and six new applications for registration. 185 visits have been paid by your Inspector to registered premises during the year.

Ten samples have been examined during the year under the above Act, five consisting of solutions of ammonia, and the remaining five of phenol disinfectants. Two of the samples of ammonia were found to contain less than 5 per cent., weight in weight, of ammonia and were therefore exempt from the requirements of the Act. Legal proceedings were instituted with regard to four samples.

## AMMONIA, SAMPLE No. A 2983.

This sample was found to contain 18·7 per cent., weight in weight, of ammonia ; the label stated—"contains 30 per cent. liq. ammon. fort. 880"—which is equivalent to 10·5 per cent., weight in weight, of ammonia. The sample, therefore, contained 8·2 per cent., weight in weight, of ammonia in excess. Further, ammonia solution containing more than 5 per cent., weight in weight, of ammonia can only be sold by Listed Sellers of Part II poisons.

## DISINFECTANT FLUID, SAMPLE No. A 2984.

This sample was found to contain 6·4 per cent., weight in weight, of phenols. The label indicated the presence of only 3 per cent. of tar acids. Disinfectant containing less than 60 per cent. of phenols can only be sold by Listed Sellers of Part II poisons.

The shopkeeper who sold both the above samples to your Inspector was not registered with this authority as a Listed Seller of Part II poisons. Proceedings were instituted against the vendor and the manufacturer of these products, the vendor being fined a total of 40s. and the manufacturers, for not declaring the prescribed proportion of the poison in the preparation, were fined a total of £12 2s. 0d.

## DISINFECTANT, SAMPLE No. A 3407.

This sample was found on analysis to contain 7·5 per cent. of cresylic acid, against a declaration on the label of 15 per cent. of cresylic acid. The packers were communicated with and an assurance obtained that the product would in future comply strictly with the declaration.

## PHENOL DISINFECTANT, SAMPLE No. A 3607.

This sample was sold to your Inspector without the label bearing the name and address of the seller, as required by the Poisons Rules. The shopkeeper has been cautioned.

## PHENOL DISINFECTANT, SAMPLE No. A 3693.

On analysis this sample was found to contain 22 per cent., weight in weight, of phenols. The vendor of this sample was not registered for the sale of Part II poisons. Legal proceedings were instituted and the defendant was fined £1 10s. 0d. and £1 1s. 0d. costs.

## AMMONIA SAMPLE No. A 3839.

This sample was found to contain 15·9 per cent., weight in weight, of ammonia. The vendor in this case was also not registered for the sale of Part II poisons. Legal proceedings were instituted and he was fined £2 0s. 0d. and £1 1s. 0d. costs.

## CARBOLIC FLUID, SAMPLE No. A 4123.

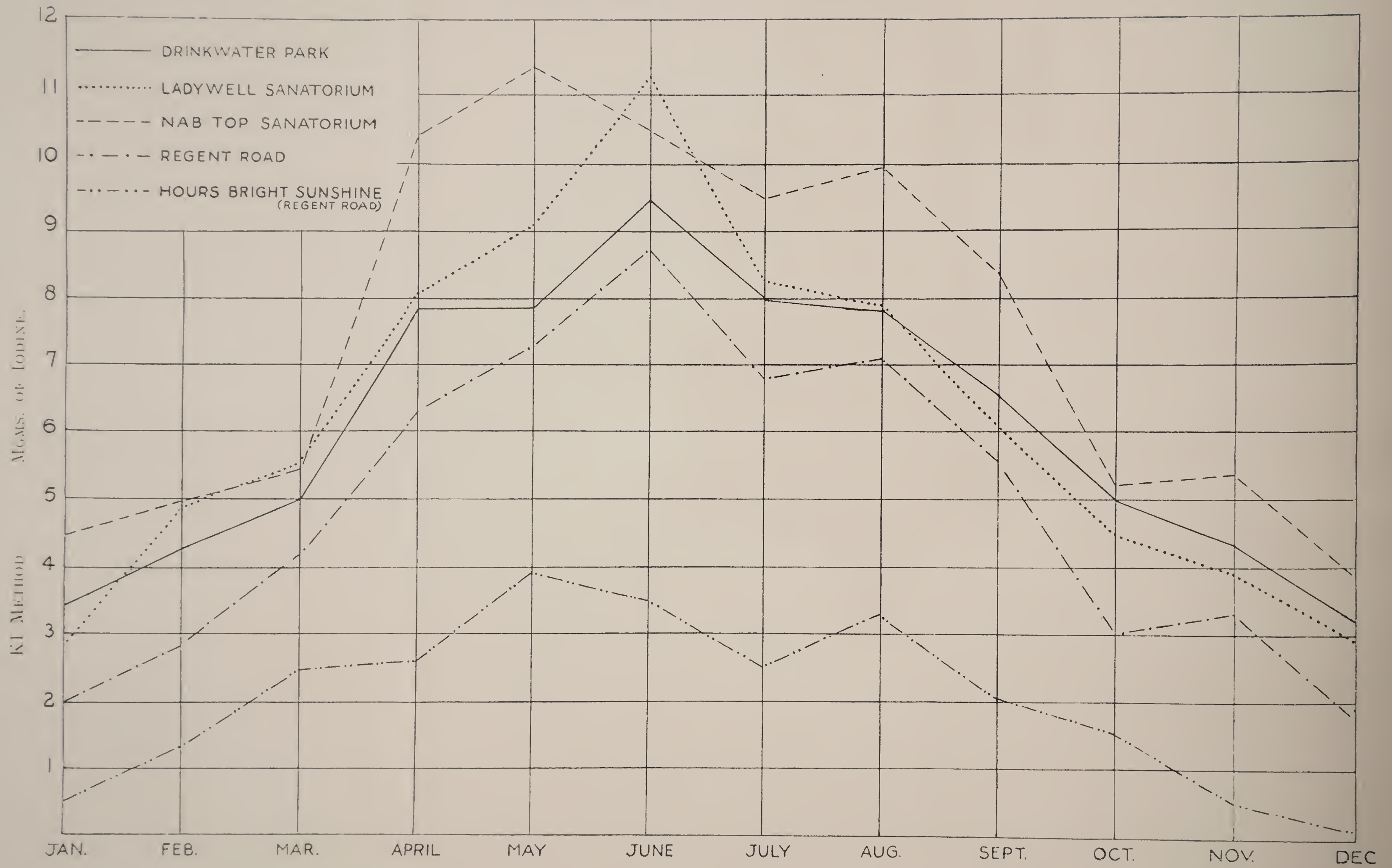
This sample contained on analysis 3 per cent., weight in weight, of phenols and was therefore a poison under Part II of the Poisons List Confirmation Order, 1935. The label bore no indication of the amount of phenols present





Fig. 1.

KI METHOD AND HOURS BRIGHT SUNSHINE, 1938.



but it was found on investigation that the shopkeeper's stock was purchased prior to January, 1937, when the new labelling requirements came into operation. The packers have been communicated with and they agreed to supply the shopkeeper with new labels for the remainder of his stock.

### Measurement of Solar Radiation.

During the year 1,220 observations have been made by the potassium iodide method, 301 by the nitrite method, 302 by Dr. Ashworth's photographic method, and 302 by the Campbell Stokes bright sunshine recorder. The integrating solarimeter has been continually in use throughout the year.

#### THE POTASSIUM IODIDE METHOD.

This process has been in continuous use for 12 years at four stations, three in Salford and one at the Corporation Sanatorium at Nab Top, Marple. Fig. 1 and the following table show the results obtained during the year and the latter also shows the yearly totals for the last five years expressed as milligrams of iodine liberated by an exposure from 9 a.m. to 9 a.m. The highest figures are, of course, obtained at Nab Top, Marple, where the atmosphere is much clearer than in the City :—

**TABLE 16.**  
MEASUREMENT OF DAYLIGHT.

Month.	Regent Road.	Nab Top Sanatorium, Marple.	Ladywell Sanatorium.	Drinkwater Park.
January.....	62.3	140.4	87.7	106.6
February.....	78.8	135.8	135.5	119.6
March.....	130.8	167.4	172.4	155.6
April.....	187.5	309.6	243.9	232.8
May.....	222.6	350.3	282.1	240.3
June.....	261.2	312.0	335.1	280.8
July.....	210.1	294.5	257.9	247.5
August.....	215.9	306.9	246.8	244.3
September.....	168.0	249.0	183.0	195.0
October.....	92.3	161.2	139.5	155.6
November.....	99.9	159.0	114.0	129.0
December.....	56.6	116.9	96.7	101.7
Yearly Totals.				
1938.....	1786.0	2703.0	2294.6	2208.8
1937.....	1588.0	2338.5	1961.7	1843.9
1936.....	1651.8	2273.4	1544.4	1676.1
1935.....	1650.2	2493.6	2051.1	1965.6
1934.....	1743.2	2323.4	2162.2	2070.6
Yearly average for five years.....	1683.8	2426.4	2002.8	1953.0
Comparative percentage figures.....	69.4	100.0	82.5	80.5
Loss against Nab Top Sanatorium.....	30.6	—	17.5	19.5



The chief feature of the results for the year under consideration is the high totals obtained. The losses against Nab Top Sanatorium over the last five years have been tabulated in the following table and it will be noticed that the steady growth of this loss has been maintained at all three stations.

TABLE 17.  
LOSSES AGAINST NAB TOP SANATORIUM.

Year.	Regent Road.	Ladywell Sanatorium.	Drinkwater Park.
1938 .....	30·6	17·5	19·5
1937 .....	29·6	16·6	19·0
1936 .....	26·5	15·1	17·7
1935 .....	27·1	12·2	15·7
1934 .....	23·6	10·3	14·0

Attention has previously been directed\* to the fact that once the potassium iodide solution has become coloured with iodine the speed of the reaction, *i.e.*, the amount of iodine liberated slows down rapidly ; this can be demonstrated either by adding a known quantity of iodine to a duplicate test, when the amount of iodine liberated on exposure will be less than in the test as ordinarily carried out, or by placing bottles out at short intervals (say 2 hours) when the total amount of iodine liberated will be greater than usual. In order to get further information bearing on, and also possibly to arrive at some quantitative idea of the extent of, this slowing down of the reaction, it was decided to expose a solution of potassium iodide to the light transmitted by various glass filters. For this purpose, eight different types of Chance-Parsons colour filters were used, the potassium iodide solution being held in transparent quartz test tubes placed behind the filters in such a manner that the only light reaching the tubes was that transmitted by the filters. The effect of a piece of ordinary window glass was also determined. Exposures were made at exactly the same time towards the same portion of the sky, and were of about seven hours duration, the contents of the tube being then titrated immediately. The following table gives the average figures for five series of tests :—

TABLE 18.  
EFFECT OF CHANCE-PARSONS FILTERS ON KI TEST.

	Blank	Window Glass	Day-light Glass	Blue Green	Ultra Violet	Purple	Light Orange	Dark Orange	Ruby	Red
Average Mgms. iodine liberated (5 tests) .....	2·57	2·32	2·26	1·72	0·97	0·73	0·25	0·11	0·07	0·07
Percentage of Blank .....	—	90·3	87·9	66·9	37·7	28·4	9·7	4·3	2·7	2·7

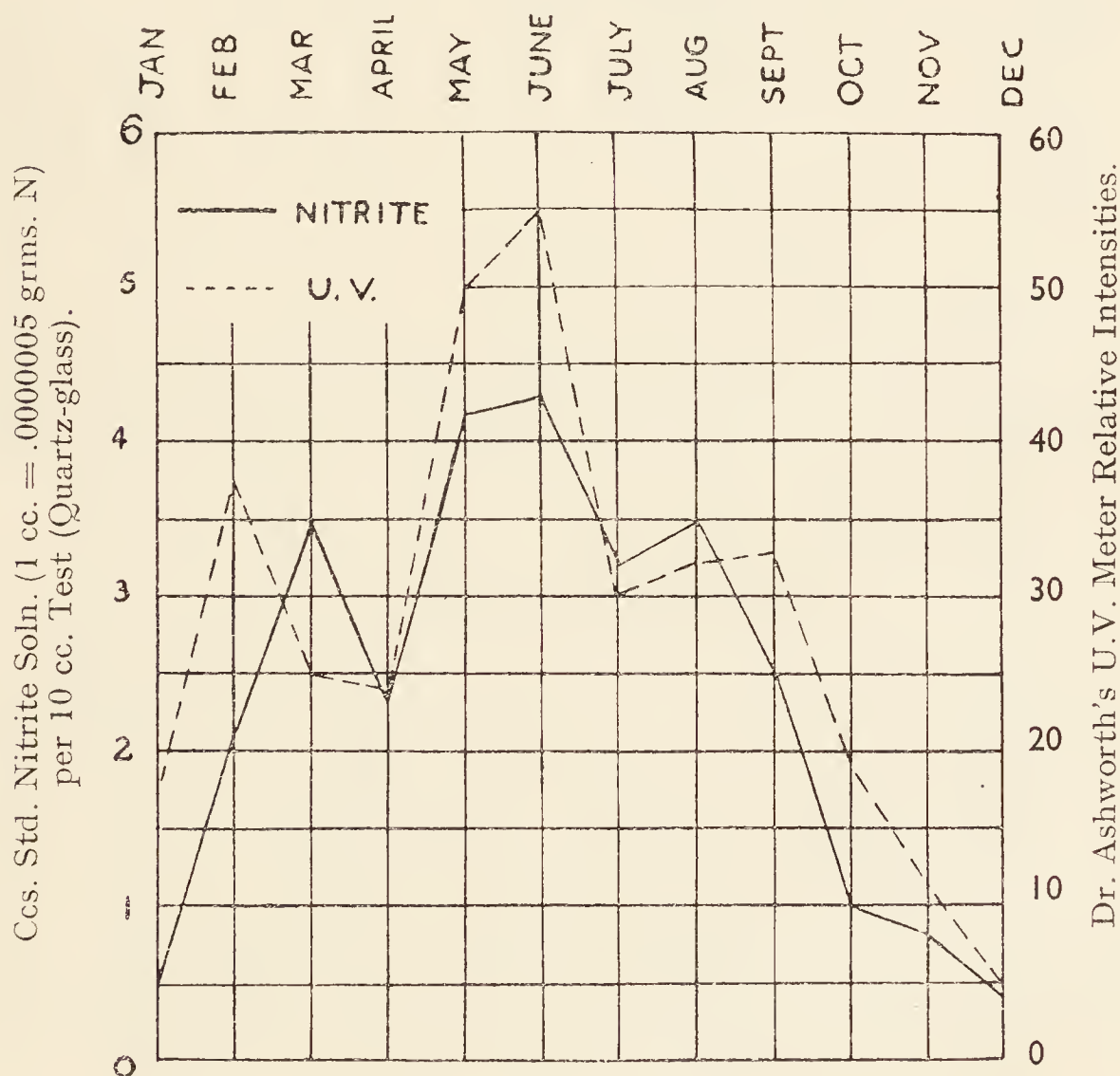
\* Annual Report, Salford, 1935, Page 38.

The most striking feature of these results is the fact that the highest figures were obtained when a proportion of both U.V. and visible blue rays were transmitted by the filters, *i.e.*, quartz, window glass, daylight glass and blue-green filter. In the next group come the U.V. and purple filters, both of which transmit a proportion of the U.V. rays but practically no visible blue rays. Lastly we have the four orange and red filters, which transmit neither U.V. nor visible blue rays, and which all slow down the reaction by at least 90 per cent. In more precise terms quartz transmits all rays down to about 200 mu and window glass down to about 320 mu. The figures supplied by the makers of the filters indicate that the daylight filter transmits down to about 328 mu, the blue-green between 370 mu and 588 mu, the ultra violet between 313 mu and 400 mu with some transmission above 700 mu, the purple between 345 mu and 410 mu with some transmission above 690 mu. The four orange and red filters do not transmit rays below 500 mu.

There is relatively little difference between the results obtained in quartz, and in quartz and window glass, indicating that the shorter U.V. rays do not play a big part in the reaction, on the other hand the effect of even the light orange filter is very great. Although the experimental accuracy of work carried

FIG. 2.

NITRITE BY GILLAM AND MORTON'S MODIFIED METHOD  
AND ULTRA-VIOLET RAY METER RESULTS.



out with colour filters is somewhat questionable, because of the difficulty of obtaining a sharp cut off at the various wavelengths, the experiments so far carried out indicate that this reaction is due almost entirely to rays of wave-lengths between 300 mu and 500 mu.

THE NITRITE METHOD AND DR. ASHWORTH'S ULTRA VIOLET RAY METER.

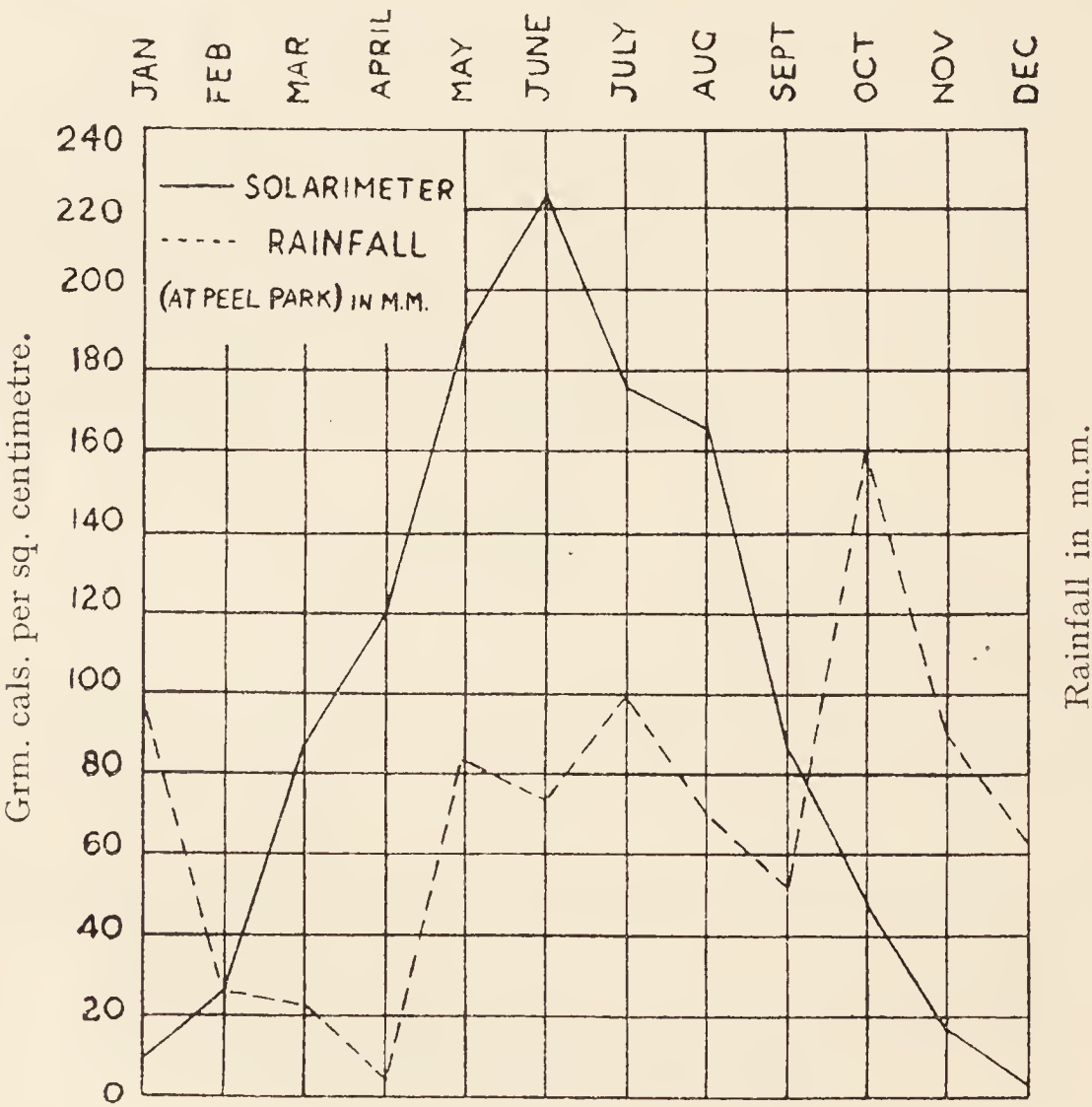
The results obtained by these two methods of measuring U.V. rays are presented graphically in Fig. 2. Since the second month of the year observations by Dr. Ashworth's instrument have been carried out using potassium dichromate light sensitive paper instead of ordinary photographic paper, which latter had been found to vary considerably in sensitivity.

INTEGRATING SOLARIMETER.

This instrument is essentially a Moll pattern thermopile coupled with a sensitive milliampere-hour-indicator. The solar radiation is, therefore, transferred into and recorded as electrical energy, the apparatus, of course, having previously been calibrated by being exposed to a standard source of radiation. The results obtained by this instrument are in terms of absolute units of energy and have, therefore, a distinct advantage over those obtained by any of the methods previously mentioned. The thermopile is non-selective and records total solar radiation, both visible and invisible. The results obtained in Salford expressed as mean daily totals in gramme calories per square centimetre, are shown graphically in Fig. 3.

FIG. 3.

SOLARIMETER READINGS AND RAINFALL AT PEEL PARK IN M.M.





The writer is only aware of one other instrument of this type in use in this country and that is a recording solarimeter installed at the Meteorological Office, South Kensington. The results for both instruments are compared in Table 19, the figures for South Kensington having been kindly supplied by the Director of the Meteorological Office.

TABLE 19.

SOLARIMETER—DAILY MEAN RADIATION.  
(Gramme Calories per Square Centimetre).

Month.	Salford.	South Kensington.
January .....	11·33	38·5
February.....	26·55	75·6
March .....	85·50	160·0
April .....	122·25	227·0
May .....	190·50	281·0
June .....	222·25	377·4
July.....	177·08	283·0
August .....	168·75	234·0
September .....	88·95	185·9
October.....	48·75	106·0
November .....	18·00	60·4
December ....	7·73	30·1

The results show big differences between the two series of observations, especially in the winter months, and they indicate in a striking manner the very considerable screening of daylight by smoke clouds in the air above this City.

Sulphur Pollution.

Two hundred and fifty tests have been carried out throughout the year at Regent Road by the volumetric sulphur method and 24 monthly tests at both Regent Road and Ladywell Sanatorium by the lead peroxide method. In the former process, the sulphur dioxide present in the air is returned as parts per million, while by the latter method, atmospheric sulphur pollution is returned as milligrammes of sulphur trioxide per 100 square centimetres of exposed surface. Both processes show a very striking rise in the winter months, and the volumetric process, by which daily determinations are made, shows exceptionally high figures on foggy days, thus demonstrating the tenacity with which smoke pollution hangs over the City during these periods.

TABLE 20.  
SULPHUR POLLUTION.

Month.	Milligrammes Sulphur Trioxide per 100 sq. cm. Daily Average.		Parts Sulphur Dioxide per million of Air Daily Average Regent Road.
	Regent Road.	Ladywell Sanatorium.	
January .....	5.48	4.79	0.067
February .....	4.85	5.02	0.070
March .....	—	4.04	0.050
April .....	3.06	2.93	0.040
May .....	3.63	3.49	0.024
June .....	2.55	2.78	0.019
July .....	4.46	3.41	0.031
August .....	2.58	2.30	0.049
September .....	3.74	3.61	0.063
October .....	4.03	5.57	0.064
November .....	4.36	3.76	0.113
December .....	5.15	4.83	0.143

Examination of Soot Gauge Deposits.

The work of examining the deposits in the special gauges placed at various points in the City has been continued. Standard gauges are situated at Peel Park, Salford; Ladywell Sanatorium; Drinkwater Park Hospital; and at the Corporation Sanatorium at Marple, Cheshire.

In uniformity with the results expressed by other stations, of which there is a number scattered throughout Great Britain, the results are expressed in metric tons per square kilometre. The metric ton is equivalent to slightly more than the English ton, whilst there are 2.59 square kilometres to the square mile, so that to convert metric tons per square kilometre to English tons per square mile, it is necessary to multiply by 2.55 or roughly 2½.

The following are the average monthly results that have been obtained during the year. It will be observed that the deposits collected at Peel Park, Ladywell Sanatorium and Drinkwater Park are very similar in amount and indicate a considerable amount of atmospheric pollution, whilst, as is to be expected, the deposit collected at Marple shows that the air there is, comparatively speaking, "pure."

In order that comparison may be made with other districts, the average figures are given for gauges situated at two other towns in the north of England.

Perhaps the most noticeable feature of the results is the acid nature of the deposits. This is shown by the pH values of the water collected. The pH due to the carbonic acid in the air would be about 5.5. Figures below this, therefore, indicate an acid deposit, and higher figures an alkaline deposit. Considering that Marple is fairly well in the country and shows a general record better than those obtained in the City, its acid rainwater is noteworthy. This shows how widespread may be the drift of acid smoke from the cities.

TABLE 21.

SOOT GAUGE OBSERVATIONS.

Monthly Averages : Metric Tons per Square Kilometre.

	Salford : Peel Park.	Salford : Ladywell Sanatorium.	Salford : Drinkwater Park.	Marple : Nab Top Sanatorium.	Southport (Mean of 2 Stations).	Hull (Mean of 3 Stations).
Rainfall in millimetres.....	70.1	71.1	85.9	70.1	78.6	54.1
Tar .....	0.12	0.15	0.10	0.05	0.04	0.06
Carbonaceous Matter other than tar .....	1.55	1.79	1.76	0.78	0.78	0.80
Ash .....	1.95	2.56	2.02	0.75	0.77	1.79
Loss on Ignition .....	1.88	1.32	2.78	0.97	1.47	1.10
Ash .....	2.60	2.00	2.62	1.01	2.12	1.77
Total Solids .....	8.10	7.82	9.28	3.56	5.18	5.51
Sulphates .....	0.98	0.85	1.16	0.48	0.56	0.84
Chlorides .....	1.11	0.94	1.54	0.59	1.28	0.46
Ammonia .....	0.03	0.04	0.10	0.04	0.014	0.05
Acidity .....	0.29	0.25	0.25	0.16	0.15	*0.06
pH.....	4.2	4.0	4.2	4.4	4.6	6.3

\* Alkalinity as NH<sub>3</sub>.



TABLE 22.

pH VALUES FOR THE FOUR STATIONS.

Month.	Peel Park.	Drinkwater Park.	Ladywell Sanatorium.	Nab Top Sanatorium, Marple.
January.....	4.4	4.1	4.0	4.4
February.....	3.9	4.0	3.9	4.5
March .....	4.8	3.5	3.6	3.9
April .....	4.4	4.4	4.3	5.0
May .....	4.1	3.8	3.7	4.2
June.....	4.2	4.2	4.3	4.4
July.....	4.1	5.5	3.9	4.3
August.....	4.1	4.2	4.1	4.3
September.....	4.1	4.5	3.9	4.3
October.....	3.9	4.1	4.2	4.6
November.....	4.3	4.3	4.3	4.5
December .....	3.7	3.9	3.7	4.3
Average for 1938.....	4.2	4.2	4.0	4.4

APPENDIX I.

FREEZING POINTS OF MILK SAMPLES, 1938.

Sample No.	Fat.	Solids-not- Fat.	Total Solids.	Freezing Point Hortvet. Δ	ADDED WATER.	
					Calc. from Sale of Milk Regulations	Calc. from Freezing Point.
	%	%	%		%	%
A 3040.....	2.92	8.43	11.35	0.561	0.8	—
A 3041.....	2.70	8.60	11.30	0.570	—	—
A 3042.....	3.20	8.65	11.85	0.563	—	—
A 3045.....	3.80	8.90	12.70	0.543	—	—
A 3052.....	2.80	8.49	11.29	0.551	0.1	—
A 3053.....	3.05	8.36	11.41	0.536	1.6	—
A 3054.....	3.30	8.46	11.76	0.541	0.5	—
A 3055.....	3.00	8.44	11.44	0.541	0.7	—
A 3058.....	2.80	8.45	11.25	0.544	0.6	—
A 3059.....	2.92	8.31	11.23	0.546	2.2	—
A 3060.....	2.92	8.52	11.44	0.560	—	—
A 3061.....	2.46	8.38	10.84	0.531	1.4	—
A 3062.....	2.50	8.49	10.99	0.539	0.1	—
A 3063.....	2.30	8.37	10.67	0.534	1.5	—
A 3064.....	2.90	8.40	11.30	0.542	1.2	—
A 3065.....	3.20	8.46	11.66	0.541	0.5	—
A 3066.....	3.00	8.46	11.46	0.544	0.5	—
A 3067.....	2.82	8.68	11.50	0.551	—	—
A 3068.....	2.70	8.30	11.00	0.542	2.4	—
A 3069.....	2.95	8.49	11.44	0.556	0.1	—
A 3085.....	4.00	8.34	12.34	0.516	1.9	2.6
A 3087.....	3.35	8.61	11.96	0.528	—	0.4

APPENDIX I.—*continued.*

Sample No.	Fat.	Solids-not-Fat.	Total Solids.	Freezing Point Hortvet. $\Delta$	ADDED WATER.	
					Calc. from Sale of Milk Regulations	Calc. from Freezing Point.
	%	%	%		%	%
A 3088.....	3.20	8.29	11.49	0.524	2.5	1.1
A 3089.....	3.80	8.41	12.21	0.526	1.1	0.8
A 3090.....	3.72	8.34	12.06	0.519	1.9	2.1
A 3175.....	3.50	8.55	12.05	0.538	—	—
A 3180.....	3.07	8.35	11.42	0.534	1.8	—
A 3181.....	3.17	8.53	11.70	0.551	—	—
A 3186.....	3.00	8.50	11.50	0.526	—	0.8
A 3187.....	3.85	8.45	12.30	0.528	0.6	0.4
A 3190.....	3.10	8.55	11.65	0.531	—	—
A 3218.....	3.83	8.35	12.18	0.533	1.8	—
A 3219.....	3.22	8.40	11.62	0.541	1.2	—
A 3258.....	3.50	8.35	11.85	0.531	1.8	—
A 3260.....	3.25	8.50	11.75	0.531	—	—
A 3265.....	3.55	8.45	12.00	0.533	0.6	—
A 3266.....	4.00	8.75	12.75	0.533	—	—
A 3377.....	3.67	8.43	12.10	0.533	0.8	—
A 3378.....	3.22	8.48	11.70	0.538	0.2	—
A 3379.....	2.70	8.30	11.00	0.517	2.4	2.5
A 3380.....	3.10	8.20	11.30	0.510	3.5	3.8
A 3389.....	3.15	8.55	11.70	0.531	—	—
A 3390.....	3.20	8.33	11.53	0.524	2.0	1.1
A 3391.....	3.90	8.21	12.11	0.523	3.4	1.3
A 3392.....	3.10	8.73	11.83	0.532	—	—
A 3393.....	2.75	8.43	11.18	0.524	0.8	1.1
A 3394.....	3.50	8.50	12.00	0.536	—	—
A 3395.....	2.35	8.04	10.39	0.499	5.4	5.8
A 3396.....	3.72	8.60	12.32	0.537	—	—
Chester 2189..	2.52	8.76	11.28	0.551	—	—
„ 2190..	2.70	8.99	11.69	0.553	—	—
„ 2191..	2.80	8.96	11.76	0.550	—	—
„ 2192..	3.35	8.78	12.13	0.555	—	—
„ 2193..	3.25	8.63	11.88	0.546	—	—
„ 2194..	3.20	9.02	12.22	0.553	—	—
„ 2195..	3.35	8.80	12.15	0.553	—	—
„ 2196..	3.75	8.75	12.50	0.551	—	—
A 3494.....	3.42	8.42	11.84	0.524	0.9	1.1
A 3563.....	2.90	8.30	11.20	0.499	2.3	5.8
A 3593.....	3.10	8.50	11.60	0.531	—	—
A 3595.....	2.95	8.60	11.55	0.533	—	—
A 3682.....	3.10	8.30	11.40	0.548	2.4	—
A 3683.....	2.80	8.60	11.40	0.545	—	—
A 3684.....	3.90	8.45	12.35	0.551	0.6	—
A 3731.....	3.90	7.88	11.78	0.491	7.3	7.4
MDA 117 .....	4.45	8.70	13.15	0.551	—	—
MDA 117A .....	4.70	8.63	13.33	0.559	—	—
MDA 118 .....	3.35	8.63	11.98	0.544	—	—
MDA 118A .....	3.55	8.59	12.14	0.544	—	—
A 3777.....	3.30	8.50	11.80	0.544	—	—
A 4012.....	3.60	8.10	11.70	0.514	4.7	3.0
A 4013.....	3.70	8.40	12.10	0.526	1.2	0.8

APPENDIX I.—continued.

Sample No.	Fat.	Solids-not- Fat.	Total Solids.	Freezing Point Hortvet. Δ	ADDED WATER.	
					Calc. from Sale of Milk Regulations	Calc. from Freezing Point.
	%	%	%		%	%
A 4019.....	4.17	8.43	12.60	0.529	0.8	0.2
A 4020.....	3.57	8.42	11.99	0.513	0.9	3.2
A 4200.....	3.60	8.50	12.10	0.545	—	—
A 4201.....	3.40	8.50	11.90	0.543	—	—
A 4237.....	3.60	8.25	11.85	0.506	2.9	4.5
A 4251.....	3.55	8.28	11.83	0.516	2.6	2.6
A 4252.....	3.60	8.46	12.06	0.524	0.5	1.1
A 4262.....	3.95	8.32	12.27	0.507	2.1	4.3
A 4265.....	3.85	8.58	12.43	0.533	—	—
A 4266.....	3.80	8.42	12.22	0.510	0.9	3.8
A 4267.....	3.40	8.70	12.10	0.522	—	1.5
A 4268.....	4.02	8.44	12.46	0.509	0.7	4.0
A 4280.....	3.57	8.66	12.23	0.526	—	0.8
A 4281.....	3.60	8.05	11.65	0.469	5.3	11.5
A 4282.....	3.72	8.13	11.85	0.501	4.4	5.5
A 4298.....	4.30	9.00	13.30	0.551	—	—
A 4299.....	3.90	9.00	12.90	0.561	—	—
A 4300.....	4.00	9.05	13.05	0.563	—	—



## SECTION VII.

# Maternity and Child Welfare Department and the Supervision of Midwives.

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**Staff.**

- 1 Senior Medical Officer, who is also Supervisor of Midwives
- 1 Assistant Medical Officer—full time.
- 1 Assistant Medical Officer—part time.
- 1 Non-medical Supervisor of Midwives.
- 16 Health Visitors.
- 18 Municipal Midwives.
- 3 Masseuses and Artificial Light Operators.
- 8 Clerks.

**Medical Officers.**

Dr. Sproul, Senior Medical Officer for Maternity and Child Welfare, is responsible for the general administration of the Department and for the Supervision of Midwives ; she is a member of four voluntary societies undertaking Maternity and Child Welfare Services in the City and is also Honorary Medical Officer to the Salford Nursery School Committee and the Salford District Nursing Association.

Dr. Boyes was appointed Assistant Medical Officer in March, 1937, and Dr. Maxwell-Reekie as part-time Assistant Medical Officer in May, 1937.

**Health Visitors.**

Each Health Visitor is allotted a district to the visiting of which most of her time is devoted. It is her duty to visit each child residing on her district, and to keep a record of its progress until it reaches the age of five years ; to visit and advise expectant mothers, and to carry on the work of the various Maternity and Child Welfare Clinics and Centres.

Propaganda work must of necessity form a very large part of the duties of Health Visitors and the time spent in this type of work cannot be shown by figures. The Health Visitors have continued an active campaign in connection with Diphtheria Immunisation.

During 1938, the Medical Staff of the Children's Wards at Hope Hospital have notified the Maternity and Child Welfare Department of all discharges from the Hospital of children under 5 years of age, and have supplied details of the feeding and treatment which the parents have been advised to carry out. These cases are " followed-up " immediately by a Health Visitor in order that advantage may be taken of the facilities offered by the Department, *i.e.*, free milk, sunlight treatment, massage, etc.

A similar arrangement has been made with the Staff of Ladywell Sanatorium, and all cases under 5 years of age are visited immediately upon discharge.

The following table shows the number of visits by the Health Visitors during 1938 :—

TABLE C.W. 1.

Wards.	First Visits to Children under 1 year.	Total Visits to Children under 1 year.	Total Visits to Children 1 to 5 years.	First Visits to Ex- pectant Mothers.	Total Visits to Ex- pectant Mothers.	Total Visits.
Albert Park.....	225	821	1352	76	104	2277
Charlestown.....	225	664	1468	70	74	2206
Claremont .....	136	348	536	27	44	928
Crescent.....	226	1479	2301	77	120	3900
Docks.....	234	776	1367	60	87	2230
Kersal.....	138	385	1085	35	39	1509
Langworthy.....	214	785	1741	65	78	2604
Mandley Park.....	222	742	1234	31	45	2021
Ordsall Park.....	233	1184	1646	80	107	2937
Regent.....	219	783	1324	63	99	2406
St. Matthias'.....	204	1427	2401	88	121	3949
St. Paul's.....	201	1135	1892	42	71	3098
St. Thomas'.....	194	643	1335	75	81	2059
Seedley .....	114	409	951	19	21	1381
Trinity.....	201	719	1540	76	130	2389
Weaste .....	222	510	1224	41	49	1783
	3208	13010	23397	925	1270	37677

#### Maternity and Child Welfare Clinics and Centres.

The City is served by the following Maternity and Child Welfare Clinics and Centres :—

	Child Welfare Sessions.	Ante-Natal Sessions.
Municipal Buildings, Regent Road .....	5 per week.	3 per week.
Murray Street, Broughton .....	4 „ „	1 „ „
Police Street, Pendleton .....	6 „ „	1 „ „
Ordsall Centre, Landseer Street .....	2 „ „	—
Encombe Place, Salford .....	3 „ „	—
St. John's Schools, Langworthy Road....	2 „ „	—
Congregational Church, Claremont Road	2 „ „	—
Hope Hospital .....	—	4 per week.
Royal District Nurses' Home, Crescent, Salford .....	1 per month.	4 per month.

The increased number of residents in the Height and Lancaster Road District has made it necessary to hold an additional session weekly at the Irlams-o'th'-Height Centre. Efforts have been made during the year to obtain more suitable accommodation for this Centre, but so far, without success. There appear to be no Church or School premises in the district more suitable for the work than those used at present, and the cost of building a new Centre

or converting any building already erected in the district is considered to be prohibitive. The work is, therefore, being carried on under difficulty and in unsuitable premises.

For many years the sessions held at the Seedley Centre have been very overcrowded, and the erection of the Langworthy Estate, comprising 450 flats has accentuated the need for a new centre in this area. Plans have been prepared, and it is hoped to erect a model centre on land adjoining the new library which is being built on Liverpool Street in the near future.

The object of the Department is to make the whole of the work educational and preventive. Every effort is made to encourage mothers to attend an ante-natal clinic as early as possible in their pregnancy and to continue to keep themselves under medical supervision until their confinement.

After their babies are born the mothers are encouraged to bring them regularly to a child welfare centre for supervision in order that they may be kept as well as possible. Whilst minor ailments are treated at the clinic, a large proportion of the work is directed towards maintaining the good health which many of the mothers and infants fortunately enjoy.

Close co-operation is maintained between the staff of the Department and other Services under the control of the Health Committee. Where necessary, patients are referred to a Consultant Obstetrician ; to the Tuberculosis Department for chest complications and X-ray examinations in cases where diagnosis by other means is difficult ; Pathological Department for various tests to assist in diagnosis and treatment ; Dental Department for cases in urgent need of dental treatment ; Venereal Diseases Clinic where patients who are found to be in need of treatment are kept under observation, and Hope Hospital for treatment during pregnancy, and, if necessary, admission to the ante-natal wards.

Table C.W. 2 shows the number of attendances at Ante-natal Clinics and the number of consultations held, Table C.W.3 shows the number of attendances at the Child Welfare Centres and the number of consultations which took place during 1938.

**TABLE C.W. 2.**  
ATTENDANCES AT ANTE-NATAL CLINICS DURING 1938.

Clinics and Centres.	Individual Cases.	Total Attendances.	Con-sultations.
Regent Road Clinic.....	654	2358	2358
Broughton Clinic .....	275	1105	1102
Police Street Clinic.....	325	1272	1272
Ordsall Centre .....	1	3	3
Encombe Place Centre.....	49	68	68
Seedley Centre .....	1	1	1
Regent Road Centre.....	—	2	2
The Height Centre .....	1	1	1
Hope Hospital Clinic .....	1500	7960	1500
District Nurses' Home Clinic.....	240	758	323
	3046	13528	6630



TABLE C.W. 3.

ATTENDANCES AT CHILD WELFARE CLINICS AND CENTRES DURING 1938.

CLINICS AND CENTRES.	NEW CASES.		TOTAL ATTENDANCES.		CONSULTATIONS.	
	Under 1 year.	Over 1 year.	Under 1 year.	Over 1 year.	Under 1 year.	Over 1 year.
Regent Road Clinic.....	226	194	2,926	3,538	1,324	1,505
Broughton Clinic .....	464	160	6,965	3,288	2,674	1,720
Police Street Clinic.....	509	123	7,800	5,287	3,011	2,217
Ordsall Centre.....	148	28	2,904	1,639	770	402
Encombe Place Centre.....	312	142	4,770	3,279	1,556	1,048
Seedley Centre.....	271	42	4,907	2,546	1,273	589
Regent Road Centre.....	154	41	1,758	1,141	525	448
The Height Centre.....	148	39	2,618	870	1,026	432
Royal District Nurses' Home.....	113	—	451	56	75	4
	2,813	927	35,099	21,644	12,234	8,365

**Maternal Mortality.**

During 1938, 15 Maternal Deaths occurred in the City. A detailed report upon each case was forwarded to the Maternal Mortality Committee of the Ministry of Health.

The causes of death were found to be as follows :—

Puerperal Sepsis.....	2
Pyæmia following Septic Abortion .....	2
Septicæmia following Abortion.....	1
Ruptured Tubal Gestation .....	1
Cardiac Failure : Post-partum Hæmorrhage....	1
Uræmia : Nephritis : Ante-partum Hæmorrhage.....	1
Pulmonary Embolism.....	1
Accidental Hæmorrhage.....	2
Central Placenta Prævia .....	1
Rupture of Uterus .....	1
Extra-uterine Pregnancy : Hæmorrhage .....	1
Uræmia : Sub-acute Nephritis : Peritonitis.....	1

**Birth Control.**

In April, 1934, the Council decided to accept financial responsibility for cases referred by the Maternity and Child Welfare Medical Staff to the "Manchester, Salford and District Mothers' Clinic," for advice and information relating to contraception.

The cases referred are married women in whose cases pregnancy is, in the opinion of the Medical Officer, liable to be detrimental to the health of the mother.

During 1937, 30 cases were referred to the Clinic, 20 of whom attended.

**Massage Treatment.**

Massage treatment is given for Rickets and other Orthopædic conditions, at the Clinics and Centres. The results in all cases where the children are brought regularly, and for a sufficient length of time, are very satisfactory. The children attending for massage treatment are seen regularly by the Medical Officers. In cases where the mothers cease attending before the children are officially discharged, the Health Visitor investigates and invites them to re-attend. After they have been discharged, the mothers are asked to bring them regularly to the Child Welfare Centres in order that they may be kept under observation.

During the year 1938, the following cases have been dealt with :—

Clinics and Centres.	No. of Sessions held Weekly.	No. of Regular Cases.	No. of Casual Cases.	Cases Discharged Cured.	Total No. of Attendances.
<b>CLINICS—</b>					
Regent Road.....	7	133	146	37	3953
Broughton.....	3	63	67	15	1490
Police Street.....	4	91	100	16	1796
<b>CENTRES—</b>					
Encombe Place.....	1	33	55	8	445
Ordsall.....	1	29	18	4	539
Seedley.....	1	43	29	3	931
	17	392	415	83	9154

#### Artificial Light Clinic.

The conditions for which artificial sunlight is administered are Rickets, Anæmia, Marasmus and Debility, following acute infectious diseases. The results obtained are very gratifying, and only a few cases fail to respond to treatment. After discharge from sunlight treatment, each child is kept under observation by the Medical Officer at the Child Welfare Centre. In a few special cases, a second course of treatment has been found necessary. The treatment is administered by a competent operator under the supervision of the Medical Officer. All cases are examined regularly during the course of treatment.

At the Regent Road Clinic five sessions per week are devoted to the treatment of children under five years of age, and at the Broughton Clinic, where the Sunlight Lamp which had been removed from the Municipal Maternity Home was installed early in 1938, two sessions have been held weekly throughout the year.

The following are the Sunlight Clinic figures for the year 1938 :—

	Regent Road.	Broughton.
Individual cases.....	326	110
Total attendances .....	4740	1598

#### CASES DISCHARGED :

Very much improved .....	31	17
Improved.....	20	9
No improvement owing to irregular attendance	142	45



### **Transfer of Information to the School Medical Department.**

During the past six years, histories of children attaining the age of five years, have been transferred to the School Medical Department. It has not been possible with the staff available to transfer the whole of the cases, but in every case where the child's health has not been satisfactory, a résumé of all the information which has been collected by the Department is sent to the School Medical Officer, together with a note of the school which the child is to attend.

A total of 700 cases were so referred during 1938.

### **Measles.**

The compulsory notification of Measles came into force on May 15th, 1936. Since that date every case of measles notified has been visited by a Health Visitor and advice given as to adequate isolation and proper nursing of the patient.

During the winter months of 1937, an epidemic of Measles commenced in the City, and continued until the late spring of 1938. The disease was fortunately of a rather mild type and the mortality from this cause was not unduly high.

Cases appearing to be in need of hospital treatment were reported to the Senior Medical Officer for Maternity and Child Welfare, and in most cases arrangements were made with the patient's own medical adviser, and the patient removed to hospital. During 1938, there were 2,582 cases of Measles notified and a total of 5,307 visits were paid by Health Visitors to these cases.

### **Free Milk Scheme.**

The Council's scheme for supplying free milk to necessitous cases provides for the supply of one pint of liquid milk (or its equivalent in dried food) per day to children under the age of two years and to expectant mothers after the sixth month of pregnancy.

Application for assistance under the above scheme has been made in respect of 1,044 families during 1938. In 912 cases milk was granted free, in 39 cases at part-payment, and 93 applications were refused on account of the family income being in excess of the amount allowed by the scale which is used to determine necessity.

During the year, a total of 1,651 children and 309 pregnant women were assisted.

### **Sewing Classes.**

Four sewing and knitting classes are held on one half day per week at three Centres, at which mothers are taught to make hygienic clothing and "thrift" garments, *i.e.*, garments made from cast-off adult clothing, for their children.

A Health Visitor attends each of these classes, and at three of the Centres help is given by voluntary workers who are member of the Salford Mothers' Guild and Ladies' Public Health Society.

### **Dinners for Expectant and Nursing Mothers.**

Arrangements are made with the Salford Mothers' Guild and Ladies' Public Health Society for the serving, on every full working day, of dinners for expectant and nursing mothers at the Ordsall, Encombe Place and Police Street Centres.

One Health Visitor is in attendance at least one day per week at each Centre, the remainder of the work being carried on by voluntary assistance. Every expectant mother attending the Centres for dinners is asked to attend the Ante-natal Clinic regularly, and is kept under medical supervision.

### **Diphtheria Immunisation.**

Immunisation Clinics have been held, in conjunction with ordinary child welfare sessions once per week throughout the year at the Pendleton, Broughton and Ordsall Centres. The Health Visitors are still experiencing some difficulty in persuading parents to allow their children to be immunised. During 1938 a total of 1,134 attendances of children under the age of five years was recorded and 151 children were brought for the complete course.

### **Home Helps.**

The applicants for Home Helps are usually known to the Maternity and Child Welfare Department through the Free Milk Scheme, and are consequently deserving cases. Home Helps are only supplied where there is absolutely no one to look after the home and other children whilst the mother is in bed. The Home Help attends at the home for ten days from the day of confinement, her hours being from 8 a.m. to 2 p.m., for which she receives from the Corporation 4s. 0d. per day, but provides her own food. Her duties are to look after the house and children generally, see older children off to school, and prepare meals for the mother and the rest of the family. She does not do the family wash, but may, if necessary, wash baby clothes in readiness for the Midwife's visit. As far as possible Home Helps are supplied from the district in which the patient lives, for the sake of convenience, and in order to save travelling expenses. If it is necessary to supply a Home Help who lives some distance away from the patient, reasonable travelling expenses are allowed.

There are four Home Helps on the books at present, they being women who are particularly suited for the work, and who are well known to the Health Visitors as to character, reliability, etc.

The Scheme has been in operation since 1920, and has worked very satisfactorily. During the year 1938, 4 women have been employed as Home Helps and 27 necessitous cases have been assisted.

**Public Health Act, 1936—Child Life Protection.**

The following is a report of work done in the administration of the Act during 1938 :—

Cases on Register at end of 1937.....	34
New Registrations during 1938 .....	23
Children removed from Register .....	26

**Including—**

Children removed from Salford .....	3
„ adopted without reward .....	2
„ attained age of nine years .....	6
„ returned to parents .....	7
„ admitted to institutions .....	2
„ transferred to another Foster Mother in Salford.....	6
„ died .....	—
Children remaining on Register .....	31
Total Visits paid during 1938 .....	381
No. of registered Foster Mothers .....	29

**Nursery Classes and Nursery Schools.**

The Salford Nursery School has been visited once each month by the Senior Medical Officer.

The inspection of children attending nursery classes at Elementary Schools is jointly performed by the School Medical Officers and the Assistant Medical Officer for Maternity and Child Welfare. The children comprise the age group 2-5 years.

The number of parents who accompanied their children was very satisfactory. In the great majority of cases the mothers were interested in the actual inspection and gave their willing co-operation to any required treatment.

In spite of the good work done at the Child Welfare Centres and by home visiting, a number of children still enter school showing some defect requiring treatment.

The following table summarises the chief defects found and the treatment instituted following those inspections made by the Assistant Medical Officer for Maternity and Child Welfare.

Eleven schools were visited during the 25 sessions devoted to this work during 1938, and 370 children were inspected.



Conditions.	No. referred for Treatment.	No. referred for Observation.
Enlarged tonsils and adenoids.....	13	19
Dental caries.....	85	23
Bronchitis.....	14	35
Strabismus.....	5	7
Other eye defects.....	4	4
Orthopædic defects (including genu valgum genu varum, postural defects and sterno- mastoid contraction) .....	15	—
Nervous conditions (including eneuresis, speech defect and nervous debility).....	20	4
Heart conditions (including congenital heart lesion, organic heart lesion).....	4	4
Otorrhœa .....	7	—

TABLE C.W.4.—NOTIFICATION OF BIRTHS.

Wards.	LIVE BIRTHS NOTIFIED BY				Births transferred to other Local Authorities	Total live births notified.	Live births not notified.	Still-births notified.	St. Mary's Still-births.
	Mid-wives.	Medical Practitioners.	Manchester Hospitals and Other Local Authorities.	Hope Hospital.					
Albert Park .....	113	18	14	87	7	225	1	7	1
Charlestown .....	123	1	5	89	2	216	—	5	—
Claremont .....	96	10	8	67	4	177	4	7	—
Crescent.....	110	12	6	98	1	225	—	12	1
Docks.....	109	—	3	75	1	186	—	12	1
Kersal .....	64	13	19	30	1	125	6	4	—
Langworthy .....	118	—	—	100	—	218	—	6	—
Mandley Park .....	174	1	64	80	74	245	7	11	4
Ordsall Park.....	117	3	4	97	1	220	1	7	—
Regent.....	96	11	7	78	1	191	1	8	2
St. Matthias' .....	118	15	9	84	—	226	—	11	1
St. Paul's .....	104	1	2	83	1	189	2	8	—
St. Thomas' .....	113	—	3	86	1	201	1	7	—
Seedley.....	65	—	3	60	1	127	—	11	—
Trinity .....	111	23	3	61	4	194	1	14	2
Weaste .....	130	2	5	87	64	160	2	7	—
	1,761	110	155	1,262	163	3,125	20	137	11

## **Municipal Midwifery Service.**

The Municipal Midwifery Service came into operation on the 1st August, 1937, and the preparation of the Scheme was described in detail in the Annual Report for last year.

The Scheme provides for the employment of 22 midwives, 18 being employed directly by the Corporation, 3 by the Salford District Nursing Association and 1 by St. Mary's Hospitals' Board, Manchester.

In order to facilitate the working of the Scheme, and to give patients as far as possible a reasonable choice of midwife, the City has been divided into five areas, four to be worked by groups of the midwives directly employed by the Corporation and the fifth to be worked by the Staff of the District Nurses' Home. The district worked by St. Mary's Hospital Staff covers approximately three of the areas mentioned.

Sixteen of the 18 midwives appointed by the Council were already in practice in the City, and thus it follows that the introduction of the Scheme has had very little effect upon the personal relationship which is so valuable both to patient and midwife. Very real efforts have been made to retain this relationship and the smooth way in which the scheme has worked during its first full year has proved these efforts well worth while, and the decision to appoint midwives already working in the district a wise one.

## **Supervision of Midwives.**

The routine supervision of all midwives practising in the area has been carried on as in previous years. The total number of midwives in district practice at the end of 1938 was 28 including 18 municipal midwives. (One of the midwives appointed under the new Act resigned in November, 1937).

The work of the Non-medical Supervisor of Midwives included the following :—

- 418 Miscellaneous visits.
- 111 Visits to Midwives' Homes.
- 720 Interviews.

During the year, 1,504 cases were attended by midwives, and 273 cases were attended by doctors with midwives acting as maternity nurses.

### **Notifications.**

Under the Midwives Act, 1902, midwives are required to make the following notifications to the Local Supervising Authority :—

1. Each time they require to call in a doctor.
2. Any contact with infectious disease other than puerperal fever or puerperal pyrexia.
3. Stillbirths.
4. Deaths of infant or mother.
5. Substitution of artificial feeding for breast feeding.



**Medical Assistance.**

During the year, 916 notifications of a midwife having sent for medical assistance were received, the causes being as follows :—

Deformed Pelvis .....	1
Abnormal Presentations.....	41
Placenta Prævia.....	4
Ante-partum Hæmorrhage.....	36
Post-partum Hæmorrhage.....	17
Uterine Inertia.....	122
Obstructed Labour, or requiring instrumental assistance.....	129
Retained Placenta or Membranes .....	21
Ruptured Perineum .....	231
Rise of Temperature.....	28
Premature Birth .....	14
Miscarriage and Abortion .....	14
Inflammation of Eyes .....	121
Other causes relating to Mother .....	79
Other causes relating to Child.....	58
Total.....	916

**Contact with Infectious Disease.**

Six notifications of contact with infectious disease were received from midwives during 1938. Two on account of having been in contact with Pemphigus Neonatorum, and four in connection with other infection. In each case the midwife was disinfected at the Mode Wheel Disinfecting Station.

**Investigation of Stillbirths.**

Forty stillbirths were notified by midwives in domiciliary practice during 1938. Each case was thoroughly investigated and the cause found to be as follows :—

- 3 Abnormal Presentation.
- 5 Premature Birth (2 of which were macerated).
- 2 Ante-partum Hæmorrhage.
- 6 Difficult Labour (1 deformed pelvis).
- 4 Deformities of Fœtus.
- 5 Toxæmia of Pregnancy.
- 3 General ill-health of mother.
- 2 Prolapse of Cord.
- 8 Macerated Fœtus (1 born before arrival of help—Inquiry held).
- 2 Cause unknown.

In five of these cases there had been no ante-natal supervision.

**Investigation of Infant Death.**

Twenty-four Notifications of Infant Death were received during 1938, the causes being as follows :—

- 8 Prematurity and Debility.
- 4 Prematurity and Cardiac Failure.
- 1 Congenital Malformation.
- 4 Congenital Heart Disease.
- 2 Asphyxia Pallida.
- 1 Convulsions.
- 2 Pulmonary Atelectasis.

**Artificial Feeding of Infants.**

During the year 1938, 31 Notifications of the substitution of Artificial Feeding for Breast Feeding were received, the reasons given being as follows :—

In 10 cases artificial feeding was ordered by the doctor in attendance.

- 15 mothers had insufficient secretion of breast milk.
- 1 mother was returning to work.
- 1 mother refused to feed her baby.
- 1 mother was suffering from Mastitis.
- 2 mothers were too ill to feed their babies.
- 1 was artificially fed on account of death of mother.

**Puerperal Pyrexia.**

Forty-two cases were notified during the year.

- 17 cases occurred in Hope Hospital.
- 20 cases occurred in the domiciliary practice of midwives.
- 2 cases occurred in the practices of doctors (1 was removed to hospital).
- 3 cases occurred in the district practice of St. Mary's Hospital (2 were removed to hospital).

All cases were thoroughly investigated by the Non-Medical Supervisor of Midwives and every precaution taken to prevent the spread of the disease. This includes the temporary suspension of the midwife and disinfection of her person, bag and clothing, and the careful supervision of other cases then being attended by her.

As the Regulations require prompt notification of any rise of temperature, special attention, and if necessary, the services of a consultant are quickly available.

Bacteriological examinations of lochia and blood are made on request at the Municipal Laboratory.

**Public Health (Ophthalmia Neonatorum) Regulations, 1926 and 1928.**

Fourteen cases of Ophthalmia Neonatorum have been notified during 1938.

- 2 cases occurred in Hope Hospital.
- 10 cases occurred in the practices of midwives.
- 2 cases were notified by General Medical Practitioners after discharge from hospital.

In five cases both eyes were affected and in nine cases one eye was affected. Two cases were classed as severe and 12 as slight. All cases recovered without injury to sight.

All notified cases of Ophthalmia Neonatorum are visited, and where necessary the case is referred to the District Nursing Association, who supply a nurse to carry out treatment under doctors' orders.

During 1938, 121 cases of discharging eyes of infants were notified by midwives in accordance with the Central Midwives Board Rules. All cases were visited regularly until the condition had cleared, and where necessary, instruction as to the method of treatment was given.

**Pemphigus Neonatorum.**

Ten cases of Pemphigus Neonatorum were notified during 1938. Six cases occurred in the practices of midwives, one was notified from a clinic and three occurred in the district practice of St. Mary's Hospital.

The age of onset varied from five days to four weeks. Every precaution was taken to prevent the spread of the disease and all the cases recovered.

**Midwives Act, 1918.**

Under the Midwives Act, 1918, section 14 (1), the Local Authority is authorised to pay the fees of registered medical practitioners called in by midwives in cases of emergency, and, where possible, recover the fee from the patient or her husband. This ensures that no lying-in woman need be without the services of a qualified medical attendant, however poor her circumstances may be. The doctors' accounts are checked and paid in accordance with the Scale of Fees prescribed by the Ministry of Health.

**Nursing Homes Registration Act, 1927.**

There were, at the end of 1938, four Nursing Homes on the Register, one of these being a Maternity Home, one Medical and Maternity and two Medical and Surgical. Three establishments were closed during the year.

The Senior Medical Officer for Maternity and Child Welfare assisted by the Non-Medical Supervisor of Midwives inspects the Homes at least once each year, and more often when necessary.



## SECTION VIII.

## Hope Hospital.

**General.**

The year has been characterised by the fact that economies have had to be practised, owing to a reduction in the amount allocated for the maintenance of the Hospital. Owing to the reduction made in the estimates for the financial year, steps were taken to meet the new position (1) by closing down 120 beds and correspondingly reducing the number of the working staff, (2) by dispensing with the services of all of the visiting anæsthetists, excepting Dr. Ghosh, (3) by reducing the number of weekly attendances of certain of the members of the Visiting Medical Staff, (4) by curtailing the use of some of the more expensive drugs and preparations, and (5) by refraining from proceeding with necessary structural improvements in wards and departments, which, however desirable, were impracticable under the financial position which had to be faced.

Wards C1 and E2 (120 beds) were closed in April. It, however, soon became apparent that this step would cause serious inconvenience in the female wards, so that, at the end of May, sixty female beds were reopened. It was found necessary to keep these beds in use throughout the rest of the year. The anæsthetics, previously administered by visiting specialist anæsthetists, were undertaken by the Assistant Medical Officers. It is to the credit of these doctors that this extra work was willingly undertaken and was performed with adequate skill and success.

It is very regrettable that the work of improving the wards in the older parts of the Hospital had again to be postponed. A large proportion of these wards are still unplastered and are lacking in the adequate hygienic and æsthetic conditions which should be essential components of every modern hospital.

It is interesting to note that, in spite of the handicaps mentioned above, the number of patients admitted has again shown an increase and that the number of patients dealt with has in most departments been up to the average. Especially to be noted is the increase in the number of admissions to the maternity department. During the previous ten years the births have borne a proportion to the ordinary admissions of just over 9 per cent. In 1938, this proportion has risen to nearly 12 per cent. This department, with its present accommodation, has now reached the limit of its capacity. If the demand for hospital midwifery continues to increase, it will be necessary to enlarge the bed accommodation considerably if the maternity work is to be undertaken with safety and efficiency.

It has not been found possible to proceed during the year with the proposed extension of the ante-natal clinic building or with the erection of a new out-patient department.

**Medical Staff.**

Dr. Henderson, R.O.O., relinquished his post in July. Dr. C. G. Roworth was appointed to this post and commenced duty in October. Owing to increasing work in the Maternity Department, the Committee sanctioned an additional medical officer, and Dr. J. K. Thomson was appointed A.R.O.O. and took up duty in May. Mr. Brown and Dr. Mackay continued to act during the year as examiners for the General Nursing Council.

The following special Consultants were called in during 1938 :—

Dr. Duthie (Diseases of the Eye) on 5 occasions.

Dr. Smith (Diseases of the Eye) on 3 occasions.

Dr. Watkins (Genito-urinary diseases) on 2 occasions.

The changes in the staff of Assistant Medical Officers were as follows :—

On the Staff on 1st January, 1938.	Appointed during the year.
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Dr. Freedman (left in May).	Dr. Barrie (January).
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Dr. Ward (left in April).	Dr. Wild (May).
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Dr. Thomson (appointed A.R.O.O. in May, 1938).	Dr. Geoffrey Brown (May).
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Dr. Ferguson.

Dr. Carmichael.

Dr. Pearson.

**Medical Wards.**

Staff.—Dr. Mackay, Whole-time Physician.

Dr. Langley, Visiting Physician.

The Assistant Medical Officers allocated to Medical Wards.

Miss Rogers (Visiting) Electrocardiologist.

Dr. Mackay reports as follows :—

GENERAL WORK.—The number of patients requiring special investigation and treatment continued to be high and the acute wards were usually full, indeed, accommodation had occasionally to be found for medical cases in other wards. The special work in the treatment of acute lobar pneumonia was continued, homologous antipneumococcus serum being the method of choice. However, towards the end of the year, a new drug, M. and B. 693, was used in selected cases. Its therapeutic value is not yet known. Diagnostic typing sera are now available against all the 32 types of pneumococci and an attempt is made to type all cases of pneumococcal pneumonia admitted to the adult medical wards.

Protamin zinc insulin is now being used in the treatment of all new cases of diabetes mellitus.

PULMONARY TUBERCULOSIS.—The total number of new cases diagnosed during the year was 80. Another 57 known cases of pulmonary tuberculosis were admitted to hospital for various reasons. All were brought to the notice of Dr. E. N. Ramsbottom, Senior Tuberculosis Officer, at his weekly visits and arrangements made to enable them to be taken under his care. Certain pulmonary cases attending the Municipal Chest Clinic were admitted to Hospital as occasion arose for specialised forms of investigation and treatment.

The ELECTROCARDIOGRAPH as an aid to diagnosis in the investigation of cardiac muscle function continued to be of great help. Reports on 499 electrocardiograms were made during the year.

MEDICAL OUT-PATIENT DEPARTMENT.—Until the end of November, 1938, the clinics were held on Tuesday and Friday mornings. Owing to increase in work with diabetic patients, it became necessary in December to hold the clinics for patients, other than diabetics, on Tuesday and Friday afternoons. New patients, numbering 570, were sent by their private medical attendants for help in diagnosis, for investigation, or for specialised treatment. Another 113 patients came to the department for observation and treatment on discharge from the wards. There were 1,675 return attendances by old patients.

The diabetic clinic was attended by an average of 30 patients per month in 1937. During 1938 the number increased to about 60. It became necessary, therefore, to have a clinic every week instead of every two weeks. The diabetic clinic is now held every Friday morning.

#### DIPHTHERIA AND SCARLET FEVER IMMUNISATION.

##### NURSING STAFF.

Number tested .....	69
Number found to be immune .....	55
Number susceptible to :—	
Diphtheria .....	9
Scarlet Fever .....	2
Diphtheria and Scarlet Fever.....	3

The susceptible nurses were immunised if they remained on the staff of the Hospital.

CHILDREN between the ages of 2 and 14 continued to be Schick tested on admission to Hospital if they had not already been tested.

#### Surgical Wards.

Staff.—Mr. George Brown, Whole-time Surgeon.

Mr. Simmons, Visiting Surgeon.

Mr. Milner, Visiting Orthopædic Surgeon.

Mr. Todd, Visiting Gynæcologist.

Mr. McKelvie, Visiting Aural Surgeon.

Dr. Roworth, R.O.O., Operative Gynæcology.

Dr. Ghosh, Visiting Anæsthetist.

Mr. Pollitt, Visiting Dental Surgeon.

The Assistant Medical Officers allocated to Surgical Wards.

Mr. Brown reports as follows :—

On the whole, the year has not been quite such a busy one as the previous year and towards the second half of the year there was an appreciable diminution in the activities of the surgical department, in common with the rest of the hospital generally. Nevertheless, the work has been evenly spaced out, and the pressure on the accommodation for surgical cases, though at times acute, has not been excessive for prolonged periods. The total number of operations for the year number 2,970, being a decrease of 65 cases from the number for the previous year. There have been no significant changes in the incidence of the various types of operation, except an appreciable diminution in the number of tonsil and adenoid operations, which has been compensated for by an increase in the minor gynæcological and genito-urinary operations and in dental cases.



The regular arrangements for ten weekly operating sessions have been maintained, together with special sessions for emergency cases. During the year, as a result of the absence of Dr. Henderson, arrangements were made for the emergency work previously done by Dr. Henderson to be done by Mr. Simmons and Mr. Heslop, and this arrangement has been continued since that time. The services of the visiting anæsthetists, other than Dr. Ghosh, were dispensed with during the year, and their work was undertaken by the Assistant Medical Officers, who were relieved in other directions by the appointment of an extra medical officer. They have carried out these duties with entire satisfaction.

The operations were distributed as follows :—

Full-time Staff :

Mr. Brown .....	521
Dr. Henderson .....	105
Dr. Roworth.....	87
Assistant Medical Officers .....	623

Visiting Staff :

Mr. Simmons (General Surgeon) .....	230
Mr. Milner (Orthopædic Surgeon) .....	58
Mr. Todd (Gynæcologist).....	230
Mr. McKelvie (Ear, Nose and Throat Surgeon) .....	805
Other Ear, Nose and Throat Surgeons.....	101
Surgeons from Radium Institute.....	10
Dental Surgeons, Mr. Pollitt and Miss Macleod .....	165
Other Visiting Surgeons.....	35

Total..... 2,970

The anæsthetics were as follows :—

General (Chloroform, Ether, Gas and Oxygen) .....	1,747
Spinal.....	920
Evipan (including 3 Avertin) .....	149
Twilight.....	34

Total..... 2,970

Anæsthetics were administered by :—

Assistant Medical Officers .....	1,924
Dr. Ghosh.....	175
Visiting Anæsthetists .....	522
Surgeons .....	315
Twilight .....	34

Total..... 2,970

EAR, NOSE AND THROAT DEPARTMENT.—The work in this department under the direction of Mr. McKelvie has continued satisfactorily. With two regular operating sessions and one consultant session, in addition to emergency sessions, he has been able to cope with the work effectively and thus avoid any undue delay in the admission of cases for operation.

ORTHOPAEDIC DEPARTMENT.—There has been no special change in the organisation of this department during the past year. Close co-operation has been maintained with the X-ray Department, and the development of this teamwork has been of material assistance during special operations, which have necessitated X-ray examination during the course of the operation. The new plaster room, provided in the old operating theatre, has been found most satisfactory. The figures for the year were :—

## IN-PATIENTS :

In Hospital on 1st January, 1938.....	54
New Admissions .....	304
Discharges .....	303
In Hospital on 31st December, 1938.....	49
Deaths .....	8

## OUT-PATIENTS :

Out-patient attendances.....	1,494
Patients treated in the plaster room.....	1,120
Anæsthetics administered in the plaster room..	86

SURGICAL OUT-PATIENT DEPARTMENT.—The work in this department has shown a slight lessening in activity during the year. Casualty cases have decreased from 353 to 302, the latter figure being almost the same as that for the year 1936. There were during the year 3,133 surgical consultations in the Out-patient Department, each of those cases being seen by a senior member of the surgical staff. A considerable amount of investigation work is being done in the out-patient department, and this has been an important factor in relieving the strain of the bed accommodation for in-patients during the year.

## OPERATIONS DURING 1938.

1. Mouth (including teeth) .....	174
2. Abscess (various) .....	138
3. Gynæcological .....	545
4. Tonsils and Adenoids .....	833
5. Bones and Joints .....	84
6. Stomach and Intestine .....	137
7. Liver and Gall Bladder .....	17
8. Appendix .....	243
9. Hernia .....	148
10. Genito-Urinary .....	222
11. Hæmorrhoids .....	63
12. Breast .....	14
13. Ear .....	16
14. Empyema.....	21
15. Nose and Throat .....	56
16. Eye .....	2
17. Brain.....	4
18. Thyroid.....	17
19. Various .....	155
20. Cystoscopic Examinations .....	81

Total.....	2,970
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**Maternity Department.**

Staff.—Dr. Roworth, Resident Obstetric Officer.

Mr. Todd, Visiting Obstetrician.

Dr. Thomson, Assistant Resident Obstetric Officer.

The Senior Assistant Medical Officer.

Dr. Roworth reports as follows :—

**General Report.**

This year has seen a further advance in the number of admissions to the Maternity Department : the figures together with those for the last few years are as follows :—

1934 .....	739	1936.....	1,046
1935 .....	833	1937.....	1,152
	1938 .....	1,350	

This great increase in numbers has thrown a great strain on the Staff, and on the Ward and Labour Ward accommodation. Whilst an endeavour has been made to keep our patients in Hospital for two weeks after delivery, it has not been possible to do so on several occasions, especially during the latter part of the year ; and it seems certain that, if the number of admissions increases during 1939 (and there seems to be every indication of this), it will be impossible to do so.

This leaves us with the alternatives of reducing the number of days in bed after delivery, a retrograde step at this time, or of restricting in some way the number of admissions to Hospital, a radical change in policy. It is possible for us to deliver and accommodate just over 1,500 women in a year “ on paper.” But this is a maximum number and can only be attained if all our beds are full all the time : and of course it is well known that maternity work is subject to frequent fluctuations in volume, and during the “ busy ” periods we are quite overwhelmed.

It would seem that we cannot longer maintain the efficiency of our work without an increase in the number of post-natal beds and labour wards.

The question of the accommodation of private patients has given rise to some difficulty. It has been impossible to accommodate them all in “ Sunny-side ” and the small special ward on A2 ward, as the six beds available are not sufficient for our numbers at all times ; this has given rise to suggestions of “ differences ” in treatment, which may have been, to some extent, justified. It ought to be possible to treat all these patients alike, and I suggest that, if private patients are to continue to be taken, the whole of A2 ward should be given over for this purpose, if steps can be taken to increase the numbers so as to fill the ward.



Lack of nursery accommodation has given us much trouble, especially in the case of wards A2 and B2. On A2 the nursery accommodation is inadequate, there is absolute lack of space, so that more cots cannot be accommodated. "Sunnyside," before mentioned, is ideal for nursery purposes, the similar room in A3 ward being used for the purpose, and I suggest that, in the circumstances, it should be used for this purpose rather than as accommodation for private patients. This would give A2 the same nursery space as A3 which it should have.

The nursery on B2 ward is too small for the work required of it. On account of this, septic and suspect cases transferred from the post-natal wards have to be taken without their infants. This state of affairs has necessitated either the discontinuation of breast-feeding for the time being, or the transfer of expressed breast milk from this ward to the post-natal block, a traffic between septic and clean ward which is to be deprecated.

The ante-natal ward has again done good work, and is of satisfactory proportions: the beds have been kept reasonably full, and the number of admissions during the year has been 466. Further details about these patients are given later in this report.

B2 ward is a great asset to the Maternity Department, and has been busy most of the year, although its work is subject to great fluctuations. There have been 387 admissions made up as follows:—

Abortions (completed)	}	254
Abortions (threatened)		
Transfers from Maternity		
Wards.....		120
Others .....		13

During the latter part of this year the day-room containing four beds has been used as a receiving ward for all patients with temperatures: they are kept in this room until the cause of the Pyrexia has been diagnosed, and then only are transferred to the main ward; this enables us to keep the main ward "clean." After four months of working in this way, the day-room appears to be adequate for the purpose. The strict "individual" nursing of the patients, which is necessary in this room would, however, be made very much easier if the beds were partitioned off.

We feel very acutely the lack of labour ward facilities on this ward: at the present time all the abortions have to take place in the ward itself, which makes it very difficult to maintain good aseptic conditions, and is also unpleasant for the other patients. A labour ward would overcome these difficulties, and would also provide us with a place where we could perform minor operations such as Curettage, at present done in the main theatre of the Hospital.

The attendances at the Ante-natal Clinics have increased in sympathy with the number of deliveries, and this has necessitated some re-arrangement during the last few months. In the first place the number of patients attending on each of the four mornings weekly has been levelled out: so that the last patient to be seen is now seldom kept after 12-15 p.m. This has, to a large extent, been made possible by removal of patients coming upon second and subsequent visits to clinics other than the Wednesday one: this leaves Wednesday morning freer for the booking-in of new cases, which are examined then instead of being sent away to return on Thursday afternoon, as before. The Thursday afternoon Clinic has been set aside solely for the full examination of Primiparæ at the thirty-sixth week of pregnancy.

Attendances at the Post-natal Clinic have been far from satisfactory: this is not the case only in Salford. But I think that something might be done to remedy this state of affairs by alteration of the time of the clinic and by more intense propaganda in the coming year.

### Work of the Maternity Department.

#### 1. DELIVERIES.

1,349 patients were admitted to the Maternity Wards (excluding the ante-natal ward) during the year. Of these 1,192 were "booked" cases from the ante-natal department, and 157 were emergency admissions.

#### ANALYSIS.

A. BOOKED CASES .....	1,192
1. Delivered in Hospital .....	1,172
2. Delivered before arrival .....	20
3. Miscarriages .....	1
4. Died undelivered .....	0
5. Maternal deaths .....	0

Of these cases 279 were admitted to the ante-natal ward at some time during their pregnancy; 144 were transferred to the labour ward from the ante-natal ward.

B. EMERGENCY ADMISSIONS .....	153
1. Delivered in Hospital .....	145
2. Delivered before arrival .....	8
3. Miscarriages .....	1
4. Died undelivered .....	2
5. Maternal deaths .....	6

Of these cases 29 were admitted, in the first place, into the ante-natal ward, and then transferred to the labour wards.

## C. INFANTILE STATISTICS.

1,350 deliveries produced 1,367 infants.

Stillbirths, 67. This represents a stillbirth rate of 49 per 1,000 births. Neo-natal deaths, 35. A Neo-natal death rate of 28 per 1,000 live births. There were 1,297 live births.

## C. ANTE-NATAL CLINICS AND WARD.

New patients attending at the clinics.....	1,231
Total number of visits.....	6,511

It must be rembered that a number of our patients are transferred to Police Street and Regent Road Clinics; if these were to be included in the number of visits the above numbers would be considerably greater.

Admissions to the ante-natal ward.....	466
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## D. POST-NATAL CLINIC.

Number of patients attending the Post-natal Clinic .....	512
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## SUMMARY.

	Booked Cases.	Emergency Cases
Presentations :		
Vertex .....	992	130
Breech .....	33	19
Face and Brow .....	1	3
Others .....	3	2
Multiple Pregnancy .....	15	2
Accidental Hæmorrhage .....	21	20
Placenta Prævia .....	8	12
Pre-eclampsia .....	69	17
Eclampsia .....	5	1
Hypertension (no Albuminuria).....	11	2
Contracted Pelvis .....	17	2
Failed Forceps .....	0	10
Prolapsed Cord .....	3	2
Hydramnios .....	8	0
Retained Placenta .....	5	5 (BBA's)
Rupture of Uterus .....	0	2
Inversion of Uterus .....	0	1
Fibroid obstructing Labour .....	0	1
<hr/>		
Cardiac Disease .....	22	4
Chest Complaints (including Phthisis)	11	1
Venereal Disease .....	3	1
Acute Appendicitis .....	0	1



MATERNAL MORBIDITY.	Booked Cases.	Emergency Cases.
Deaths .....	0	10
*Pyrexia .....	22	7
White Leg .....	2	5
Breast Abscess .....	2	0
*Cases with temperature of 100·4 F. maintained for 24 hours or recurring during that period, within 20 days of delivery.		
Total number of Pyrexial cases of all degrees .....	318 or 23·6% of all cases.	

## EXTRA HEADING.

Prolonged Labour .....	72	17
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I have gathered together cases under this heading as it embraces various conditions, such as Disproportion, Uterine Inertia, etc. To have these several conditions under separate headings, would form many tables containing small numbers of cases; by bringing them together under this one heading, many features common to them all are usefully compared; and difficulties in exact diagnosis which are of little importance compared with the course of labour itself are obviated.

My standard of Prolongation has been a labour lasting for 30 hours or more.

## BLOOD TRANSFUSION AND INTRAVENOUS SALINE.

Blood transfusion was performed.....	10 times.
Intravenous Saline was given.....	3 times.

## PERINEAL DAMAGE.

The Perineum was sutured, after laceration....	477 times.
Episiotomy was performed .....	100 times.

## ANAESTHETICS.

Anæsthesia was induced on 256 occasions in the natal and ante-natal wards. Of this number 63 were by inhalation, and the remainder were spinal anæsthetics.

## INDUCTION OF LABOUR.

Labour was induced on 159 occasions. Of these :

Drug Induction (Bath, Oil, Enema and Pitocin if necessary) .....	92
Puncture of the Membranes .....	57
Surgical (introduction of soft rubber Bougie through the Cervix) .....	10

## INFANT STATISTICS.

1,350 deliveries produced 1,367 infants. There were 17 twin deliveries.

STILLBIRTHS, 67. This is equal to 49 per 1,000 births.

NEO-NATAL DEATHS, 35. This is equal to 28 per 1,000 live births.

LIVE BIRTHS, 1,297.

**Children's Wards.**

Staff.—Dr. Catherine Chisholm, C.B.E., Visiting Physician for Diseases of Children.

The Assistant Medical Officers allocated to the Children's Wards.

During 1938 it has not been practicable to do anything to improve the wards used for the accommodation of children. As noted last year, these wards are far from satisfactory. The clinical and nursing work in the children's wards continues, however to reach a high standard of excellence.

During the latter part of the year, Dr. Chisholm arranged to devote a part of each of her visits to additional supervision of the newly born infants in the maternity wards, particularly of the premature and weakly babies. Her services there have been most valuable and have been highly appreciated by the obstetric staff.

**V.D. Cases.**

The number of male cases admitted for treatment was 55, as compared with 67 in 1937.

The number of female cases (including children) was 47, as compared with 57 in 1937.

Dr. Marinkovitch has continued his valuable services as consultant in Diseases of the Skin and numerous cases have been referred to him for advice.

**Treatment of Cancer.**

In accordance with the scheme of collaboration with the Christie Cancer Hospital and Holt Radium Institute, a comprehensive service for the examination of cases and the expert diagnosis of cancer is made available and treatment, both of cancerous and non-cancerous cases, by means of radium and deep X-ray therapy is promptly available for all cases. Radium applications are made at this Hospital by experts from the staff of the Radium Institute or when it is thought advisable the cases are sent to the Christie Hospital for treatment by radium. All cases requiring deep X-ray therapy are sent to the Christie Hospital where they are treated as out-patients, being transferred to and from the Radium Institute by ambulance.

The number of cases dealt with was as follows :—

	1937.	1938.
Examined at the Institute .....	42	62
Treated here with Radium .....	15	16
Sent to the Christie Hospital for the application of Radium .....	1	7
Treated at the Christie Hospital as out-patients (Deep X-rays) .....	8	22

**Laboratory Investigations in Pathology.**

Staff.—Dr. Crawford, City Pathologist.

Dr. Lois Stent, Assistant City Pathologist.

Three Technicians.

The appended table shows a list of the examinations carried out for the Hospital at the Pathological laboratory during 1938. The total number of specimens examined was 16,605, an increase of over 2,000 on that of last year.

The work has been gradually going up and during the past three years has increased by over 50 per cent. This is due to the growing demands made upon the laboratory for the investigation of cases in the wards and is inevitable if pace is to be kept with medical progress.

**BACTERIOLOGICAL EXAMINATIONS.**

Swabs for K.L.B. ....	2,988
„     Hæmolytic Streptococcus.....	831
Urine .....	1,666
Exudates .....	548
Direct typing of pneumococci .....	157
Stools for organisms.....	163
Smears for Gonococci .....	321
Anærobic Cultures .....	54
Antibodies .....	263
Sputa for T.B. ....	1,506
Blood Cultures .....	267
Vaccines.....	9
Hæmolysins.....	1

**BIOCHEMICAL EXAMINATIONS.**

Blood Sugar .....	1,195
„     Urea .....	201
„     Inorganic Phosphate .....	1
„     Uric Acid .....	2
„     Calcium .....	3
„     Spectroscopic Examinations .....	5
Urea Clearance .....	354
Test Meals.....	437
Stools for Occult Blood.....	351
Van den Bergh Reaction.....	38
Urine—Routine Examination .....	670
Colloidal Gold Reaction .....	24
Milk Phosphatase.....	107
Urine for Calcium.....	3
„     Arsenic .....	1
Stools—Identification of Heavy Metals.....	1



## HAEMATOLOGICAL EXAMINATIONS.

Blood Counts .....	696
Reticulocyte Counts.....	661
White Cell Counts .....	166
Red Cell Counts .....	125
Blood Grouping .....	164
Hæmoglobin Estimations .....	157
Fragility Tests .....	9
Sedimentation Rate.....	766
Coagulation Time.....	11
Paul-Bunnell Reaction .....	2
Platelet Counts.....	8
Films for Parasites.....	47

## PATHOLOGICAL EXAMINATIONS.

Cerebro-Spinal Fluids .....	241
Pleural Fluid.....	103
Autopsies.....	221
Histological Sections .....	754
Museum Specimens .....	1

## MISCELLANEOUS EXAMINATIONS.

Mouse Inoculations .....	189
Smears for Trichomonas Vaginalis .....	117

Total.....	16,605
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## STATISTICS.

## 1. GENERAL.

	1937.	1938.
In Hospital on 1st January.....	937	926
New Admissions.....	10,156	11,059
Live Births.....	1,086	1,261
	<hr/>	<hr/>
Totals.....	12,179	13,246
	<hr/>	<hr/>
Discharges during the year.....	10,012	10,042
Deaths.....	1,241	1,077
Remaining under treatment at the end of the year.....	926	866
	<hr/>	<hr/>
Totals.....	12,179	11,985
	<hr/>	<hr/>
Mortality .....	10.0%	8.9%
	<hr/>	<hr/>

	1937.	1938.
Average cost per patient per week.....	61s. 7d	64s. 0d.

## 2. X-RAY DEPARTMENT.

	1937.	1938.
Number of Patients.....	5,088	4,597

## 3. DEPARTMENT OF MASSAGE AND ELECTRO-THERAPEUTICS.

(a) <i>Massage.</i>	1937.	1938.
Number of In-Patients.....	361	313
Number of Out-Patients.....	362	364
	<hr/>	<hr/>
Totals.....	723	677
	<hr/>	<hr/>
Number of Treatments :—		
In-Patients .....	7,178	7,534
Out-Patients .....	6,190	6,052
	<hr/>	<hr/>
Totals.....	13,368	13,586
	<hr/>	<hr/>

(b) <i>Electro-Therapeutics.</i>	1937.	1938.
In-Patients .....	244	237
Out-Patients .....	233	229
Totals.....	477	466

## Number of Treatments :—

In-Patients .....	8,007	8,800
Out-Patients .....	5,113	4,748
Totals.....	13,120	13,548

(c) *Ultra-Violet Radiation.*

Number of Treatments.....	1,481	1,349
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## 3. OUT-PATIENTS' DEPARTMENT.

Dressings and Treatments.....	19,576	15,835
Consultations, etc.....	4,154	5,319
Totals.....	23,730	21,154

## 4. DEPARTMENT OF PATHOLOGY.

Autopsies Conducted.....	169	229
Specimens Examined.....	14,260	16,605

## 5. MENTAL WARDS.

	1937.			1938.		
	Male.	Female.	Total.	Male.	Female.	Total.
Patients under treatment on 1st January .....	65	82	147	51	82	133
Patients transferred from County Mental Hospital....	—	—	—	—	—	—
Patients admitted during the year .....	153	136	289	149	138	287
Totals.....	218	218	436	290	220	420

## DISCHARGES.

	Male.		Female.		Total.	
	1938.	1937.	1938.	1937.	1938.	1937.
Released c/o Friends.....	47	46	40	42	87	88
Transfers to Mental Hospital....	38	42	30	22	68	64
Released to other Wards.....	15	11	24	18	39	29
Released to other Institutions..	5	16	0	15	5	31
Discharged during the year.....	105	115	94	97	199	212
Deaths during the year.....	35	51	21	25	56	76



TABLE SHOWING INCREASE IN WORK OF THE HOSPITAL SINCE 1914.

Year.	Admissions.	Births.	Discharges.	Deaths.	Average Daily No. of Patients.	Operations.
1914	2,728	12	2,135	591	749	149
1915	1,632	4	1,393	491	514	160
1916	1,330	—	941	353	439	175
1917	1,263	3	1,058	335	407	145
1918	1,402	16	1,104	391	303	144
1919	1,559	7	1,056	348	339	107
1920	2,516	64	1,736	451	689	163
1921	3,335	227	2,899	617	858	332
1922	3,720	263	3,272	745	888	395
1923	4,463	250	3,749	815	870	430
1924	4,416	182	3,742	922	811	523
1925	5,315	293	4,292	1,015	868	802
1926	5,471	366	4,839	903	943	882
1927	5,801	409	5,125	1,003	943	960
1928	6,430	559	5,545	926	960	1,076
1929	7,477	674	6,936	1,141	918	1,403
1930	7,583	685	7,150	1,038	969	1,807
1931	7,963	812	7,762	1,093	919	2,004
1932	8,521	843	8,156	1,052	961	2,186
1933	8,031	615	7,572	1,084	940	2,201
1934	7,893	745	7,548	1,081	940	2,080
1935	8,371	782	8,079	1,020	912	2,152
1936	9,504	961	9,291	1,122	977	2,691
1937	10,156	1,086	10,012	1,241	1,021	3,035
1938	11,059	1,312	10,042	1,077	937	2,970

